

Weather Unit Test Study Guide

Name _____ Test Date _____

Clouds

1. Where do clouds form? Clouds form in air that has HIGH humidity AND A LOT of water vapor.
2. What is a cloud? Condensed water vapor
3. How do clouds form? As water vapor rises into the air, it begins to lose heat. The water vapor turns back into a liquid, or condenses, on small pieces of dust particles as it cools; forming clouds.
4. What are the 4 common types of clouds?

Directions: Draw an illustration to help you remember the clouds. Under your picture, write what type weather this cloud typically means for the future.

| | |
|---|--|
| <p>Cirrus clouds: form high in the atmosphere, where it is very cold. Made mostly of ice crystals. WISPY</p> <p>Weather: _____</p> | <p>Cumulonimbus clouds: very tall cumulus clouds that develop into RAIN clouds. GREY STORM CLOUDS</p> <p>Weather: _____</p> |
| <p>Stratus clouds: form low in the atmosphere and typically cover the sky. BLANKET</p> <p>Weather: _____</p> | <p>Cumulus clouds: Puffy clouds that indicate fair weather. FLUFFY</p> <p>Weather: _____</p> |

5. What is fog? Condensed water vapor (cloud) that forms close to the ground

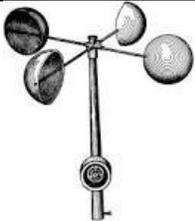
Precipitation and Sky Conditions

| Precipitation | How it Forms/ Falls | Precipitation | How it Forms/Falls |
|---------------|--|---------------|--|
| Rain | Precipitation that falls directly as water. Falls straight down with temperature higher than 32 degrees Fahrenheit | Sleet | Precipitation that falls as water than begins to freeze as the atmosphere temperature becomes lower than 32 degrees Fahrenheit as it falls |
| Snow | Precipitation that turns directly into water crystals. Falls straight down with temperatures higher than 32 degrees Fahrenheit | Hail | Solid precipitation that forms in clouds as wind continues to push water up and down in a cloud creating ice pellets. |

Weather Predictions

- Meteorology: the study of _____, particularly _____
- Weather: the conditions of the atmosphere at _____
- Climate: the pattern of weather an area experiences over _____
- Air Mass: a large body of _____ that has similar _____ throughout

Weather Instruments & Forecasting Weather

| Instrument | What is measured? | How it is used in FORECASTING Weather |
|--|-------------------------------|---|
|  Thermometer | Temperature of the atmosphere | Temperature warms up means: Temperature cools down means: |
|  Barometer | Air Pressure | Rising barometer means: Fair, nice weather (thumbs up) Falling barometer means: |
|  Anemometer | Wind Speed | Change in wind speed means: |

| | | |
|---|--|--|
|  <p>Wind Vane</p> | | <p>The direction the wind is coming from tells you that you can forecast you will get the weather from that direction.</p> |
|  <p>Rain Gauge</p> | | <p><i>Not used in forecasting weather! It does help us know how much rain we received.</i></p> |

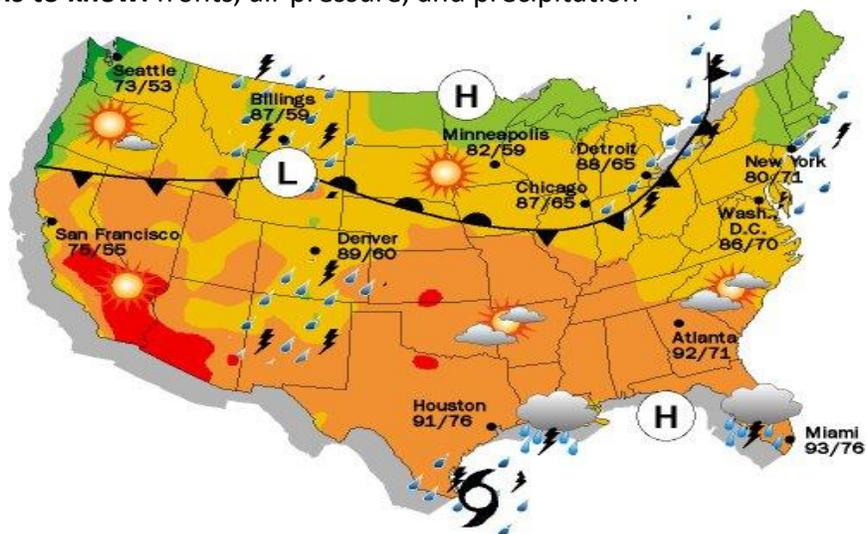
Fronts

- Most _____ changes occur along fronts.

| Type of FRONT | Picture to Help You Remember & Symbol | Weather |
|--|---------------------------------------|---|
| <p>Cold Front</p> <ul style="list-style-type: none"> • forms when a cold air mass moves under a warm air mass. | | <ul style="list-style-type: none"> • Causes heavy rain, thunderstorms, or snow. • Cold fronts move <i>quickly</i> so storms are short. |
| <p>Warm Front</p> <ul style="list-style-type: none"> • forms where a warm air mass moves over a cold air mass. | | <ul style="list-style-type: none"> • Stratus clouds form ahead of front. • Produce rain or snow that can last for hours. |

Weather Maps

- Weather maps use symbols to show the weather.
 - **Symbols to know:** fronts, air pressure, and precipitation



- **Weather Station:** a place where many different instruments measure the weather
- What do Doppler radars detect using radio waves? _____ & _____

Impact of Weather

What jobs are impacted by weather (besides meteorologists)

1. _____
2. _____
3. _____
4. _____
5. _____

Helpful Websites

- **Clouds:** <http://www.bbc.co.uk/schools/whatisweather/aboutweather/cloud.shtml>
- **Bill Nye Storms:** <http://www.youtube.com/watch?v=vHivnBsuMJA>
- **BrainPop:** www.brainpop.com
 - username: jacksonelem
 - password: jaguar

Videos to Review

- Water Cycle
 - Clouds
 - Humidity
 - Weather
 - Temperature
 - Climate Types
- **StudyJams:** <http://studyjams.scholastic.com>
 1. Click on “Science” and “Weather & Climate”
 2. Video to Review
 - The Water Cycle
 - Clouds & Precipitation
 - Air Masses & Fronts
 - Air Pressure & Wind
 - Weather Instruments