All About Weather
Unit Test

***Name*_____ *Date*_____**

Part 1: Choose the Correct Answer
Directions: Read each sentence and circle the correct answer.

1) Weather occurs in this layer of the atmosphere:
   a. Stratosphere
   b. Exosphere
   c. Troposphere

2) The process in which a vapor turns back into a liquid is known as:
   a. Melting
   b. Condensation
   c. Evaporation

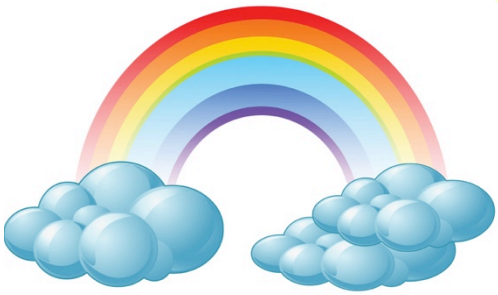
3) Cirrus clouds are also known as:
   a. Low clouds
   b. High clouds
   c. Middle clouds

4) In Fahrenheit, water freezes at:
   a. 32°
   b. 0°
   c. 25°

5) Thunderstorms form from this type of cloud:
   a. Cumulonimbus
   b. Altostratus
   c. Cirrus

6) The first person to describe rainbows was:
   a. Galileo Galilei
   b. Sir Isaac Newton
   c. Nicolaus Copernicus

7) Monsoons affect this region of the Earth:
   a. Northern and Eastern Europe
   b. Mid-West United States
   c. South and Southeast Asia



8) Seasons are the result of:
   a. The tilt of the Earth's axis
   b. The Equator
   c. The Moon

Part 2: Key Terms
Directions: Use the word bank to match each word to a definition.

Fog	Below Freezing	Meteorology	Sleet	UV Rays
Rain	Temperature	Overcast	Thunder	Humidity

1) **Humidity**: A quantity representing the amount of water vapor in the atmosphere

2) **Fog**: A thick cloud of vapor that reduces visibility.

3) **UV Rays**: The rays from the Sun that can cause damage.

4) **Meteorology**: The study of weather or weather patterns.

5) **Below Freezing**: Any temperatures below 0°C/32°F.

6) **Overcast**: A cloudy sky with no visible sunlight.

7) **Thunder**: Loud noise caused by lightning.

8) **Rain**: Water that falls from the sky.

9) **Sleet**: A form of precipitation consisting of ice, mixed with rain and snow.

10) **Temperature**: The degree of heat present.

Part 3: True or False
Directions: Read each statement. Write "T" for true and "F" for false.

1.	**T**	Hot air is less dense and lighter than cold or cool air.
2.	**T**	There are 5 categories in the Saffir-Simpson Hurricane Wind Scale.
3.	**F**	A rainbow is a real thing that you can touch if you are high enough in the sky.
4.	**F**	Weather vanes measure wind speed.
5.	**F**	Places near the Equator experience all four seasons.
6.	**T**	La Niña produces colder or below-average temperatures.
7.	**T**	Evaporation occurs quicker in warmer temperatures.
8.	**F**	Celsius is considered an "old-fashioned" method of measuring temperature.

Part 4: Weather Warnings

Directions: Read each weather prediction. Determine what type of warning or watch should be issued and write the letter on the line.

[A] Excessive Heat Watch	**[B]** Excessive Heat Warning	**[C]** Tropical Storm Warning	**[D]** Blizzard Warning
[E] Wind Chill Advisory	**[F]** Tropical Storm Watch	**[G]** Frost/Freeze Warning	**[H]** Wind Chill Warning

1) **H**: Tomorrow's forecast includes cloudy skies and a wind chill of -30°F. Bundle up!

2) **B**: Saturday's weather includes very sunny skies and the third consecutive day of a heat index of 115°F!

3) **F**: Within the next 24 hours we will see Tropical Storm Eva in our area!

4) **E**: Today's forecast includes snowy conditions and a wind chill temperature of -17°F!

5) **D**: Friday's forecast is predicted to be very snowy conditions and gusty winds of 40 mph!

6) **C**: Within the next 36 hours it is possible Tropical Storm Greg will be in our area!

7) **A**: This weekend's forecast includes sunny condition and the possibility of heat indices of 115°F!

8) **G**: Tomorrow we will see below freezing temperatures and windy conditions!

Part 5: Short Answer
Directions: Read and answer each question.

1. At what angle must the sunlight hit a raindrop in order for a rainbow to form?

   42°

2. What happens to water molecules when the temperature drops?

   The molecules lose energy and attach to each other.

3. What is a cloud made up of?

   A collection of water droplets or ice pellets.

4. Celsius is used in almost every country except for?

   United States

5. What causes a thunderstorm?

   Moisture, unstable air that is warm and rises quickly, and lift.

6. What happens when frozen raindrops constantly bump into each other within a thundercloud?

   Lightning occurs

7. What is dispersion of light?

   The separation of white light into colors.

8. What are the five causes for climate?

   Latitude; Elevation; Ocean/Wind Currents; How close the location is to water; Terrain

Part 6: Weather Tools
Directions: Use the word bank to match each tool to its description.

Thermometer	Barometer	Anemometer
Rain Gauge	Satellite	Doppler Radar

1) **Thermometer**: Used to measure the outside temperature.

2) **Anemometer**: Used to measure the wind speed.

3) **Satellite**: Used to view cloud formations over a specific area.

4) **Barometer**: Used to measure the air pressure.

5) **Rain Gauge**: Used to measure the amount of rainfall.

6) **Doppler Radar**: Used to determine the rate of precipitation as well as wind speed and direction.

Part 7: Water Molecules
Directions: Describe the molecules of each state of water. In the last box of the chart, draw what the molecules look like.

Solid	Liquid	Gas
Do not assume the shape of container; fixed in one position; do not move freely; not a lot of space between them	**Assume the shape of the container; move freely; not a lot of space between them**	**Assume the shape of the container; move freely; a lot of space between them.**
Molecules	**Molecules**	**Molecules**
 Solid	 Liquid	 Gas

Part 8: Fill in the Blank
Directions: Fill in the blank with the correct word from the word bank.

Energy	Typhoon	Unevenly	Beaufort Scale
Bora	Equator	Atmosphere	Climate

1) Water vapor uses the Sun's **energy** to form tiny droplets and creates the process known as condensation.

2) The **Beaufort Scale** is used to measure weather's intensity based on wind power.

3) The **Equator** is an imaginary line that goes around the center of the Earth.

4) A tropical storm in the region of the Indian or western Pacific Ocean is known as a **typhoon**.

5) The **Bora** wind system is a Northeasterly wind that blows from Eastern Europe to Italy.

6) The Sun **unevenly** heats the Earth's surface, which is why wind occurs.

7) **Climate** describes the weather of a specific area over a long period of time.

8) Weather is the state of the **atmosphere** at a given time.

Extra Credit!
Directions: Color the rainbow in the correct order!