Temperature

By Sharon Fabian

[1] On a cool autumn day, it's nice to play outside or go for a walk in the mountains. A hot summer day is a good time to go to a water park. Sometimes in the cold winter months you can enjoy ice skating or having a snowball fight, but you won't know for sure what kind of a day it is until you check the temperature.

[2] Temperature is a measurement of how much heat is in the air. Since the heat in the air comes from the sun, you could also say that it is a measure of solar energy. Temperature is measured with a thermometer in either degrees Fahrenheit or degrees Celsius. On the Fahrenheit scale, 32 degrees is the freezing point for water, and 212 degrees is the boiling point. On the Celsius scale, 0 degrees is freezing, and 100 degrees is boiling.

[3] There are other, less scientific, ways to measure the temperature too. Some people say that a cricket is a good thermometer! In the evening, when the crickets are chirping, count how many times one cricket chirps in 14 seconds; this number should tell you the temperature. Some people also think that the wooly caterpillar can predict the temperature of the coming winter. If the brown stripe on the wooly caterpillar is wider that the black, it is a sign of a long, cold winter to come.

[4] However you measure temperature, you should know that temperature can be affected by many different factors. The season of the year is just one of the factors. Latitude is another one. People who live in far northern latitudes, like northern Canada, can expect colder temperatures than people who live in tropical latitudes, like Central America. Altitude also affects temperature. If you climb to the top of a mountain, you will be much colder than you were at the bottom of the mountain. Some mountains in warm countries even have ice at the top all year around. Ocean currents affect the temperature for people who live near the sea. Industries and farms have also caused changes that affect the earth's temperatures.

[5] Once you start to pay attention to temperature measurements, you will notice some of these types of changes in temperatures. You will see that temperatures can vary a lot from place to place and even in the same place. For example, in Alabama the highest temperature ever recorded was 112 degrees Fahrenheit, in 1925. The lowest temperature there was -27 degrees, recorded in 1966. One of the highest temperatures in the world was recorded in Libya. There, in 1922, the temperature reached 139.5 degrees. A low temperature of -128.6 degrees was recorded in Antarctica in 1983.

[6] Benjamin Franklin was one person who thought is was important to pay attention to the weather. In his Poor Richard's Almanack, he said "Some are weatherwise, some are otherwise."

[7] If you are one of the people who are "weatherwise," you might want to investigate two more weather topics, the heat index and the wind chill index.

[8] The heat index combines information about temperature and humidity to tell us how hot it really feels. When the heat index is high, it is time to use some precautions to avoid heat-related accidents like sunstroke or heat exhaustion. Some common sense things people can do to beat the heat include slowing down their activity level or moving inside, wearing clothes that are both light in weight and light in color, and drinking plenty of water.

[9] The wind chill index is a combination of temperature and wind speed. It tells us how cold it feels outside. When the wind chill index is high, people should wear layers of clothes to hold in their body heat.

[10] Being "weatherwise" is an all-around good idea. It can help keep us safe, and can also help us plan that day at the beach or on the ski slopes.

Name _____ Science Pd _____

Temperature

1. The main idea of this article is
   - (A) How to measure temperature
   - (B) High and low temperature records
   - (C) Information about temperature
   - (D) Benjamin Franklin

2. The two scales used to measure temperature are Fahrenheit and _____.
   - (A) Heat index
   - (B) Wind chill index
   - (C) Celsius
   - (D) Temperature

3. The word that tells how far north or south of the equator a place is located is _____.
   - (A) Tropical
   - (B) Altitude
   - (C) Latitude
   - (D) Season

4. This word tells how high a mountain is.
   - (A) Season
   - (B) Latitude
   - (C) Altitude
   - (D) Tropical

5. Using a cricket to measure temperature could best be described as _____.
   - (A) Scientific fact
   - (B) Folklore
   - (C) Proven data
   - (D) A lie

6. The heat index combines temperature and _____ to tell how hot it feels outside.
   - (A) Precipitation
   - (B) Humidity
   - (C) Wind speed
   - (D) Air pressure

7. The wind chill index combines temperature and _____ to tell how cold it feels outside.
   - (A) Wind speed
   - (B) Humidity
   - (C) Air pressure
   - (D) Precipitation

8. Wind chill affects how cold people feel, but it doesn't affect things like how much antifreeze your car will need on a cold day, or whether the pipes in your house will freeze. Can you explain why?

_____

_____