

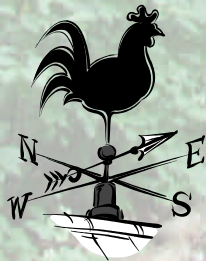
HUMBER ARBORETUM ECO CENTRE

WEATHER



INTERESTING FACTS

- ✦ In Canada, temperature is measured by the Centigrade or Celsius scale. The freezing point of water is 0°C and the boiling point of water is 100°C. In the United States, temperature is measured by the Fahrenheit Scale. For Fahrenheit, the freezing point of water is 32°F and the boiling point is 212°F.
- ✦ Wind is named for the direction from which it comes. For example, if the wind comes from the north, it is called a North Wind. A North Wind often brings cold weather. A South Wind often brings warm weather. In the Northern Hemisphere where we live, the winds most often come from the west and they are consequently called the Prevailing West-erlies. If you observe trees growing out in an exposed field, you will see that the growth of the tree has been shaped by the prevailing winds. The branches tend to point to the east, away from the wind.



COOL ACTIVITIES

Make it Rain in the Classroom!

You will need a large glass jar, preferably one that holds a couple of litres with a wide mouth. A large preserving jar would do. You will also need a plate, a source of hot water and a tray of ice cubes.

Pour hot water into the jar to a depth of 5 cm. Place the plate on top of the jar. Allow it to sit for a few minutes so that the jar and plate will warm up. Fill the plate with ice cubes. Observe what happens inside the jar.

Water droplets should form on the underside of the jar and drip down into the water. It is "raining" in the jar.

How does this happen?

As the warm moist air rises in the jar, it comes into contact with the cool plate and condenses on the underside of the plate. When the droplets get heavy enough, they fall down. This is what happens outside to cause it to rain. As warm air rises into the upper atmosphere it meets cooler temperatures which cause the water vapour in the air to condense into water droplets forming clouds which results in precipitation (rain, snow, sleet depending on the temperature).

REVIEW QUESTIONS

1. What are the four components of weather? (ANS: Temperature, Humidity, Wind, Air Pressure)
2. What instrument is used to measure temperature? (ANS: the thermometer)
3. What instrument is used to measure humidity? (ANS: Percent humidity is measured using a hygrometer.)
4. What instrument is used to measure wind speed? (ANS: an anemometer)
What instrument is used to measure wind direction? (ANS: a weather vane)
5. What instrument is used to measure air pressure? (ANS: a barometer)
6. What is wind chill and how does it affect us? (ANS: the weather forecast often mentions wind chill factors. It is a measure of how cold it actually feels to exposed skin. It is always less than the temperature of still air. The wind chill results from moving air removing the warmed air that surrounds us. We are a source of heat and the more the wind removes the heated air around us, the more our body tries to heat our surroundings. This causes us to become chilled.)