

Weather

What does the word “weather” mean to you? Everyone knows	10
how to describe the weather. There are beautiful sunny days with	21
blue skies and then there are gray rainy days perfect for staying in	34
bed. But do you know what actually causes weather?	43
Let’s start with a scientific definition of weather. Weather is	53
the state of the atmosphere at a given time and place. Four main	66
ingredients determine the weather: temperature, humidity, wind speed	74
and direction, and air pressure.	79
Temperature is the heat of the air. When the sun shines down	91
on earth, it warms up the earth’s surface. But that is not all that	105
happens. The warmth of the sun also heats up the water on earth.	118
This process is responsible for many changes in weather and weather	129
patterns. A thermometer measures temperature.	134
Humidity is the amount of water in the air. The air always	146
has water in it, even though we cannot always see it. Most of the	160
weather conditions that we can observe come from humidity. Clouds,	170
rain, and snow all have to do with humidity.	179