



Early Weather Scientists

Long ago, weather was a mystery. People thought the gods made the weather. The ancient Greeks believed the god Zeus sent lightning bolts to the earth when he got angry. People believed the myths because they had no other way to understand weather. No one knew how to measure heat, cold, or wind.

In 1564, Galileo Galilei was born in Italy. He was interested in many things. He could paint and play music, but he also loved science. He solved the mystery of how to measure heat and cold. He did this by making the first **thermometer**. His work and his life led others to study science, too.

Later, Galileo's student made the first **barometer**. A barometer measures **air pressure**. High pressure often means dry, sunny weather. Low pressure often means wet weather and storms.

Observing the Sky

Galileo made many discoveries. He was especially skilled in **astronomy**. Astronomy is the science that studies outer space. Galileo's work helped us to understand how the sun, moon, and planets move.





↑ Gabriel Daniel Fahrenheit

Years passed. Not much progress was made in the study of weather. Then, Gabriel Daniel Fahrenheit was born in 1686. His parents both died when he was young. He had to work hard as a shopkeeper to make enough money to live. However, his real passion was science.

Fahrenheit knew that earlier thermometers were flawed. The **temperature** changed with air pressure on Galileo's thermometer. Other designs had problems, too. Fahrenheit found a way to make the thermometer more accurate.

He decided to use **mercury**. Mercury swells with heat. It shrinks as it gets colder.

It rises and falls at a steady rate.



↑ Mercury forms into droplets like these at room temperature.

↓ At 212°F freshwater boils.



↓ At 32°F freshwater freezes into solid ice.



It works over a wide range of temperatures. Best of all, in a thermometer, mercury gives exact measurements!

Fahrenheit marked two points on his new thermometer. The temperature where saltwater froze was marked at 0°F. His body temperature was marked at 100°F. Between those two, freshwater froze at 32°F. It boiled way up at 212°F. At last, people could record and compare temperatures accurately.

Today's Weather Scientists

Today, there are many ways for people to get weather reports. Often, they watch **meteorologists** give reports on television. But meteorologists don't just report the weather. They need to know how to study and predict it before it occurs. That way, we can prepare for different types of weather. We can take precautions if a storm is brewing. We can plan a weekend trip to the beach if sunny days are ahead. Mish Michaels is an important television meteorologist. Her career is filled with awards for her work in weather.

