

Name: _____

10 Minutes with Science

Thunder



When a storm approaches, we usually hear thunder. Thunder is a loud, frightening noise that occurs after there is an electric shock in clouds.

How does thunder occur? When a violent electric shock occurs in the atmosphere called lightning, it produces a sudden expansion of the air that surrounds it. This explosion of air is what produces that characteristic sound of thunder.

Although lightning and thunder occur almost at the same time, we see the lightning first because light travels faster than sound. That is why it is possible to calculate, more or less, how far a person is from a storm. We simply multiply the time that passes between lightning and thunder by the speed of sound, which is approximately the 330 meters per second. To do this, count the seconds that pass from when the lightning is seen, and thunder is heard and then multiply that by 330.

For example, if we see the glow of a lightning bolt, and ten seconds later we hear the thunder; we multiply 10×330 , which results in the storm being about 3,300 meters away. That is a distance just over three kilometers.

Sunlight during the day makes it hard to see lightning, so thunder can surprise us since it is easily heard. That is why it isn't surprising that people in the past associated thunder with the frightening voices of their deities, or that according to their traditions, they will grant some powers.

