

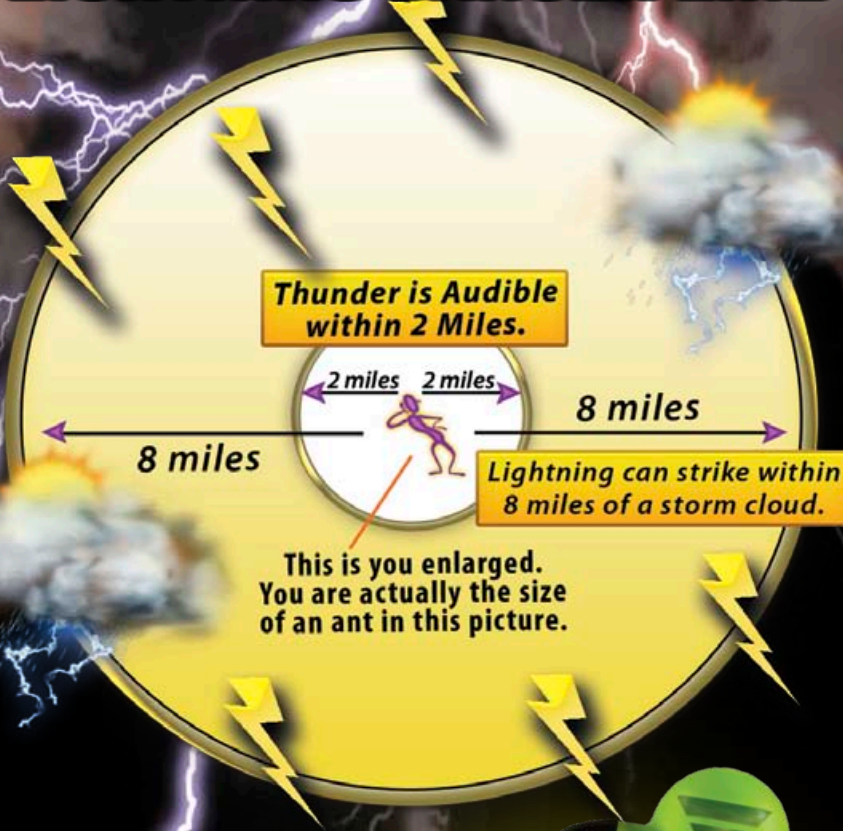
3 REASONS WHY THE FLASH-BANG METHOD = DANGER

One Mississippi... Two Mississippi... ???

Trying to guess the distance to lightning activity using the method of counting the seconds between a flash and a bang is dangerous. At best, the information you think you get is mis-leading. At worst, you don't get any warning at all about lightning activity close enough to strike your location.

In 2007 the NCAA revised its Sports Medicine Handbook removing the FLASH-BANG method from their lightning safety guidelines.

LIGHTNING DANGER LINE



1

Here's Why...

The speed of sound in dry air is 1090 feet per second, which equals about one mile in five seconds. This is the heart of the counting method, which tells you to count the seconds from the time you see a flash until you hear the thunder and divide by five. This should be the distance in miles from your location.

2

Except that almost all of the time... it's not.

While the speed of sound in dry air is 1090 feet per second, it can be very different in wet air (like in a thunderstorm), or humid air. The amount of actual sound volume you might receive is dependant on wind direction, obstructing terrain, and most important, the actual shape and form of the lightning stroke itself.

3

The end result is that very few lightning strokes produce clean and reliable sound waves that can be used in the counting method. In most cases, the clap of thunder can't be heard at distances more than 2-4 miles. If you're standing in a noisy environment like a sporting event, the distance you can hear thunder is probably much less.

The clap of thunder from lightning is the result of the ionization channel from the stroke collapsing on itself. The sound you hear is air molecules colliding with each other in the instant that the channel collapses. But the actual direction that the sound radiates away depends on many details- like the approximate angle the channel forms with the ground- whether the primary channel is slanting toward you or away from you- and many others.

Still need more proof? See Diagram.

Another problem with using the counting method is simple confusion about which flash goes with which bang. A typical thunderstorm produces a number of ground strokes and cloud-to-cloud strokes every minute. For an active storm, this could be ten to twenty events per minute. In this situation, it is nearly impossible to know which flash went with a particular clap of thunder, even if you heard it.

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