



Shocking Lightning Science

Lightning Myth or Fact Game

Ask students to decide whether each statement about lightning below is a myth or fact.

1. If you're caught outside during a thunderstorm, you should crouch down to reduce your risk of being struck.

- ▶ **Myth** - Crouching doesn't make you any safer outdoors. Run to a building or hard topped vehicle. Inside is much safer than outdoors.

2. Lightning never strikes the same place twice.

- ▶ **Myth** - Lightning often strikes the same place repeatedly, especially if it's a tall, pointy, isolated object. The Empire State Building is hit an average of 23 times a year.

3. Lightning can strike even if it's not raining or there aren't clouds overhead.

- ▶ **Fact** - Lightning often strikes more than three miles from the center of the thunderstorm, far outside the rain or thunderstorm cloud.

4. Rubber tires on a car protect you from lightning by insulating you from the ground.

- ▶ **Myth** - Most cars are safe from lightning, but it is the metal roof and metal sides that protect you, NOT the rubber tires. When lightning strikes a vehicle, it goes through the metal frame into the ground. So convertibles, motorcycles, bicycles, and vehicles without a metal roof offer no protection from lightning.

5. It is dangerous to touch someone who has recently been struck by lightning.

- ▶ **Myth** - Most cars are safe from lightning, but it is the metal roof and metal sides that protect you, NOT the rubber tires. When lightning strikes a vehicle, it goes through the metal frame into the ground. So convertibles, motorcycles, bicycles, and vehicles without a metal roof offer no protection from lightning.

6. If you are in a house, you are safe from lightning.

- ▶ **Fact...mostly** - A house is a safe place to be during a thunderstorm as long as you avoid anything that conducts electricity. This means avoid touching electrical appliances, wires, TV cables, computers, plumbing, and metal doors.

7. Standing under a tree during a thunderstorm is one of the leading causes of lightning deaths.

- ▶ **Fact** - If you are caught outside in a thunderstorm, you should keep moving towards a safe shelter. Do not hide under a tree! Better to get wet than struck by lightning!

8. Structures with metal or wearing metal on the body (jewelry, cell phones, watches, etc) attracts lightning.

- ▶ **Myth** - While metal does not attract lightning, it does conduct it, so stay away from metal fences, railing, bleachers, etc. If a metal structure is struck by lightning while you are touching it, you are in danger too.

9. These factors increase the chance of a building or object being struck by lightning: if it is very tall, if it has a pointy shape, or if it is all by itself in an open field.

- ▶ **Fact** - Skyscrapers and trees are more likely to be struck by lightning than the ground around them. Tall mountains often get struck by lightning many times a year.



10. If you are 2-3 miles away from where you last saw lightning strike you are considered relatively safe from lightning danger.

- ▶ **Myth** - In the past, 2-3 miles away from previous lightning flashes was considered safe, but The National Severe Storms Laboratory has increased the distance to 6-8 miles.

11. Lightning can spread out from the point where it hits the Earth.

- ▶ **Fact** - Some types of lightning have been measured more than 20 meters away from where it hit the ground. The distance lightning spreads out can depend on a variety of things, such as the type of soil and the amount of water on the ground.

12. If you see lightning nearby while you are outside playing a game, it is okay to finish the game quickly before seeking shelter.

- ▶ **Myth** - Many lightning injuries happen because people do not seek shelter soon enough. No game is worth the risk of injury. Seek shelter immediately if you hear thunder.

Adapted from the National Weather Service, *Lightning Myths*: <https://www.weather.gov/safety/lightning-myths>