What Is Lightning?

Read the passage. Then answer the questions in full sentences.

Name _____ Date _____

Lightning is a giant spark of electricity. In the United States, there are about 25 million flashes of lightning every year.

Lightning starts inside a thunderstorm cloud. As the air moves, bits of ice and hail in the cloud bump into each other and become charged with electricity. The top of the cloud ends up with a positive charge, and the middle and bottom with a negative charge. When the difference grows too great, the electricity rushes across in a flash.

A flash can heat the air to 50,000 degrees Fahrenheit, about five times hotter than the surface of the Sun. The hot air spreads out so fast that it makes a sound: thunder.

Thunder travels about a mile every five seconds. Count the seconds from the flash to the thunder and divide by five to find how many miles away it was. If you can hear thunder at all, you are close enough to be struck, so get to a safe place.

1. **About how many flashes of lightning are there in the United States each year?**

2. **You count 10 seconds from a flash to its thunder. About how far away was it?**

3. **What makes the sound of thunder?**

4. **Why is it not safe to keep playing outside when you hear thunder far away?**

Answer key

What Is Lightning?

1. About how many flashes of lightning are there in the United States each year?
   About 25 million.

2. You count 10 seconds from a flash to its thunder. About how far away was it?
   About 2 miles: 10 divided by 5 is 2.

3. What makes the sound of thunder?
   The flash heats the air so much that the air spreads out very fast, and that makes the sound.

4. Why is it not safe to keep playing outside when you hear thunder far away?
   Sample answer: lightning can strike far from the storm, so if you can hear the thunder, it could strike where you are.