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Why Do Thunder and Lightning Happen?

When clouds move around in the wind, the water droplets and ice pieces inside them collide and rub against each other, creating electricity. When there is a lot of electricity in a cloud, it can no longer stay in the cloud. So, the electricity tries to move to another cloud or the ground. At this time, what comes down flashing from the sky to the ground is lightning.

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5201 Great America Pkway, Santa Clara, CA 95054
Website : www.gosedusoft.com
E-Mail : davidann819@gmail.com

Written by David Ann

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GM Kids Series



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Why Do Thunder and Lightning Happen?



We have all seen lightning flashes
and heard thunder rumbling
in the sky.
These are called "thunderstorms,"
which happen in unique clouds
in the sky.

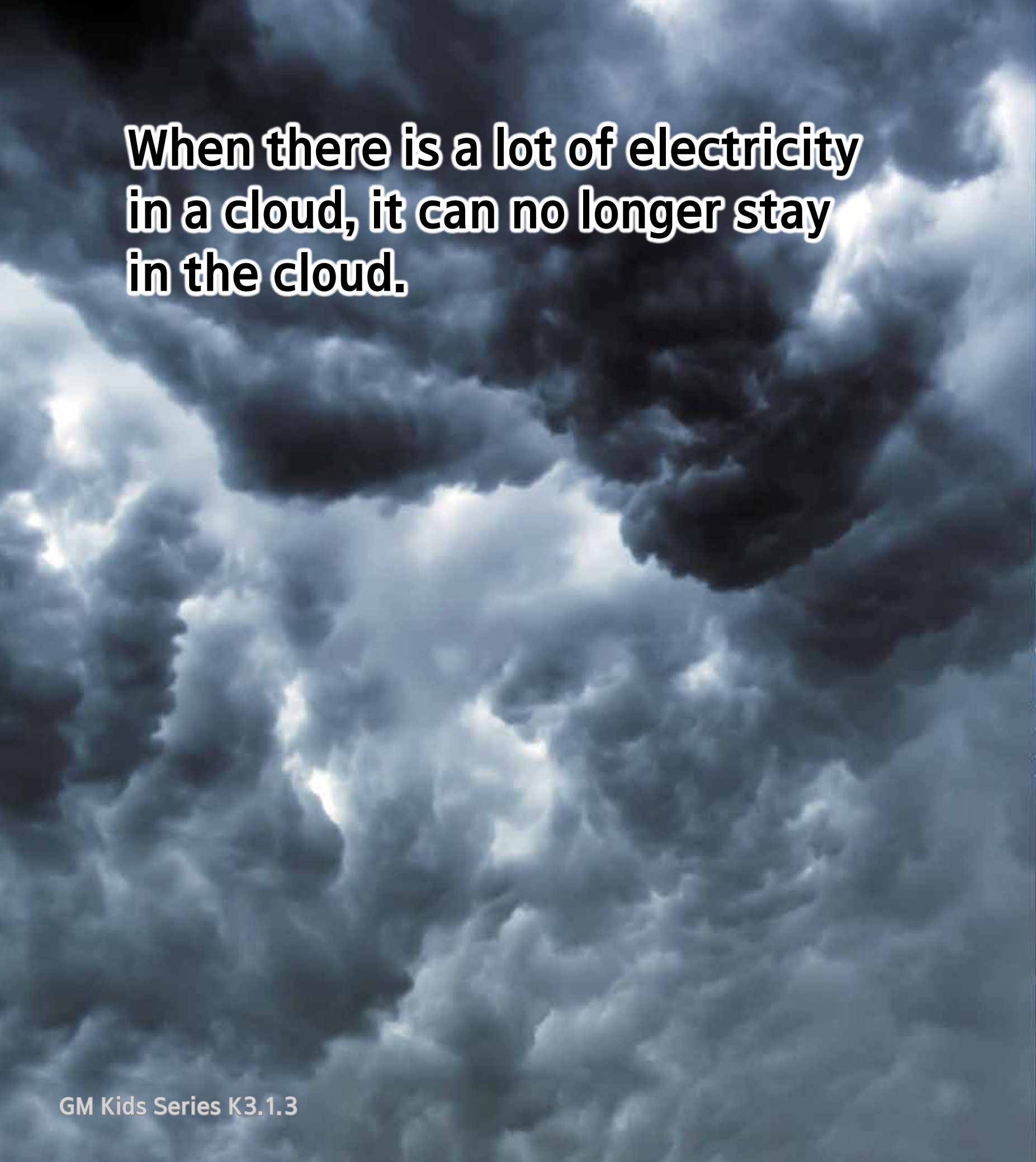


**These special clouds are called
"cumulonimbus clouds" or
"thunderheads."
Let's find out why and how thunder
and lightning happen.**

Why does lightning happen?

When clouds move around in the wind, the water droplets and ice pieces inside them collide and rub against each other, creating electricity.



A close-up view of dark, heavy, and textured storm clouds, filling the frame with varying shades of grey and black.

**When there is a lot of electricity
in a cloud, it can no longer stay
in the cloud.**

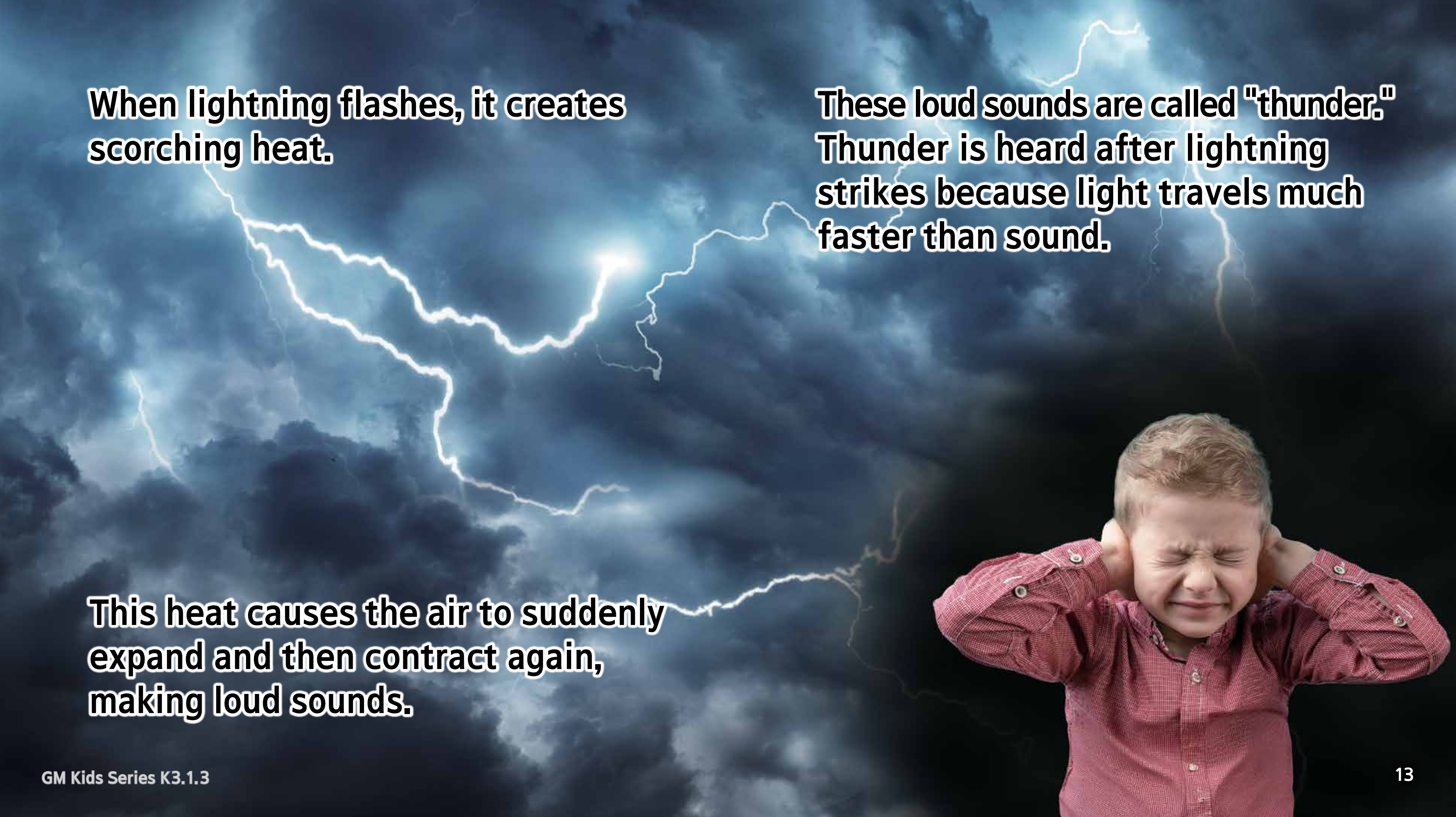


**So, the electricity tries to move
to another cloud or the ground.**

**At this time, what comes down
flashing from the sky to the ground
is lightning.**



**Lightning is the light made by
the sudden release of electricity
collected in clouds.**



When lightning flashes, it creates scorching heat.

These loud sounds are called "thunder." Thunder is heard after lightning strikes because light travels much faster than sound.

This heat causes the air to suddenly expand and then contract again, making loud sounds.





Now we know why we see lightning first and then hear thunder! Lightning is a powerful electrical energy, so it is very dangerous if we get hit.

A long metal rod stands on top of buildings. This metal rod is called a "lightning rod" and is responsible for sending lightning safely into the ground.




**It is a good idea to turn off
our home electronic devices
during lightning.**



**This is because devices like TVs
and computers can break down
when lightning's electrical energy
suddenly enters them.**

On rainy days, we often see thunder and lightning. When it rains, there are many clouds, and they have a lot of electricity.





But lightning does not happen
only when it rains.
Sometimes, it can happen
even on non-rainy days.

This is called "dry lightning."
Dry lightning can cause wildfires,
so we must be careful.



**Thunder and lightning are
like great shows in the sky
that nature performs for us.**

**To enjoy the shows safely,
we must take some precautions.**


**Never stand under a tree
when lightning strikes.
Do not stand on high ground.**

**Also, it is better not to go
near water.**

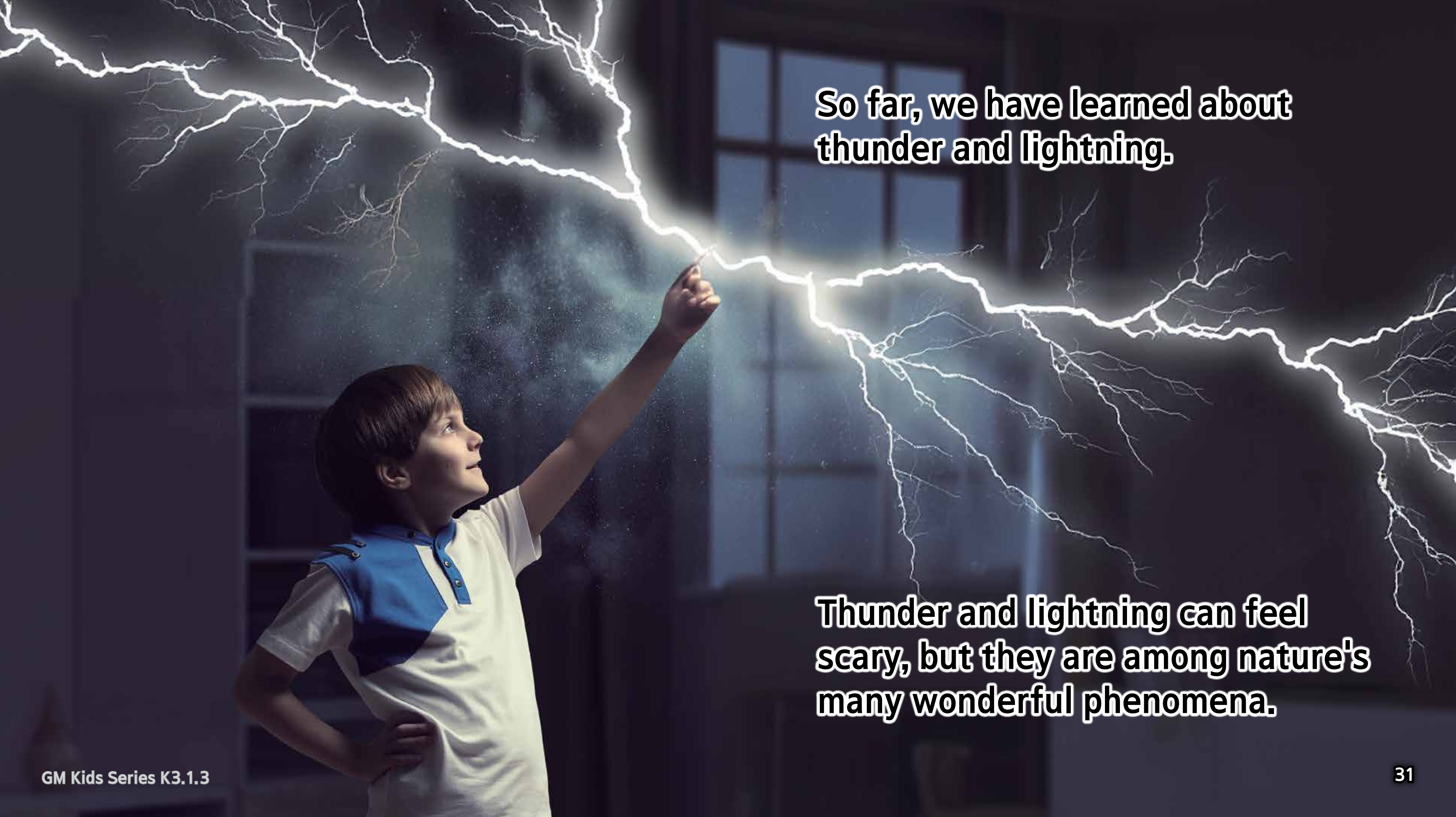
The longest recorded lightning bolt happened in Brazil.

It measured 709 kilometers. It was a very long lightning bolt.





**Then how long did the longest
lightning strike last?
It is reported that the longest
lightning strike lasted about
16.7 seconds in Argentina.**



**So far, we have learned about
thunder and lightning.**

**Thunder and lightning can feel
scary, but they are among nature's
many wonderful phenomena.**

**Wouldn't it be great to see
thunder and lightning up close
in a safe place?**

**Exploring the mysteries of nature is
a wonderful way to study math.**

