

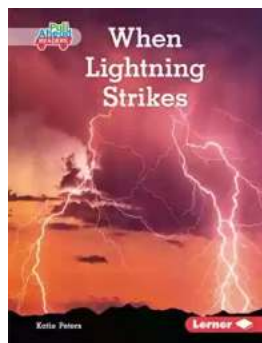
# When Lightning Strikes: Let's Look At Weather and Pull Ahead Readers in Nonfiction

Lightning is one of nature's most spectacular phenomena. Over the centuries, it has fascinated and terrified people, sparking myths and legends, while also leading to scientific discoveries about weather and electricity. In this nonfiction article, we will take a close look at lightning and its connection to weather patterns, shedding light on its awe-inspiring and dangerous nature.

## The Power of Lightning

When lightning strikes, it illuminates the sky with a burst of energy. The bright flash can be seen for miles, followed by the sound of thunder rumbling through the air. It captures our attention and evokes a sense of wonder.

But what exactly causes lightning? The answer lies in the intricate workings of our atmosphere. Thunderstorms, which consist of towering cumulonimbus clouds, are the primary generators of lightning. These powerful storms bring together the necessary ingredients for an electrical charge: moist air, updrafts of warm air, and cold air aloft.



## When Lightning Strikes (Let's Look at Weather (Pull Ahead Readers – Nonfiction))

by Katie Peters (Kindle Edition)

★★★★☆ 4.3 out of 5

Language : English

File size : 2829 KB

Screen Reader : Supported

Print length : 16 pages



As the storm clouds develop, an electrical charge builds within them. Within the cloud, tiny ice crystals and supercooled water droplets collide, creating friction and separating electric charges. The positive charges accumulate at the top of the clouds, while negative charges gather near the bottom.

The separation of charges within the cloud sets the stage for a lightning strike. When the voltage between the ground and the cloud becomes strong enough, a channel of hot, ionized air is formed, creating a path for the electrical discharge. The intense heat causes the air to expand rapidly, producing the thunder that accompanies every lightning strike.

## **Dangerous and Destructive**

While lightning can be beautiful to witness, it is also extremely dangerous. On average, around 2,000 people are killed by lightning strikes each year worldwide, and countless others are injured. The power contained within a single bolt of lightning can generate temperatures five times hotter than the surface of the sun. It can also produce a current of electricity ranging from 30,000 to 50,000 amps, enough to cause significant damage.

When lightning strikes the ground, it can follow various pathways, including through trees, buildings, and even the human body. The rapid discharge of electricity can lead to severe burns, organ damage, and even cardiac arrest. That's why it is crucial to take lightning storms seriously and seek shelter indoors, away from windows and any potential conductors of electricity.

## **Effect on the Atmosphere**

In addition to the immediate dangers, lightning also has an impact on our atmosphere. Each lightning bolt releases a tremendous amount of energy, which can affect the composition of the air we breathe. Nitrogen and oxygen molecules in the atmosphere are broken apart by the electrical discharge, leading to the formation of nitrogen oxides, ozone, and other reactive gases.

These gases, in turn, contribute to the purification of the air by removing pollutants and producing beneficial compounds. Lightning helps shape the chemistry of our atmosphere and plays a vital role in maintaining its balance.

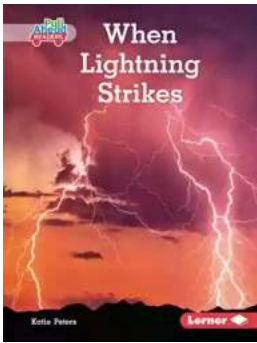
## **Appreciating the Phenomenon**

Lightning serves as a reminder of the immense power and beauty of nature. While it can be dangerous, it has also inspired awe and wonder in humans throughout history. Artists have depicted lightning in their works, poets have immortalized it in verses, and scientists have strived to understand its complex nature.

Nonfiction literature allows us to delve deep into the mysteries of lightning, exploring its connection to weather patterns and its impact on our world. By learning about lightning, we can gain a greater appreciation for the natural wonders that surround us.

So next time a lightning storm lights up the sky, take a moment to marvel at the forces of nature at play. Remember the amazing science behind every lightning strike and the way it pulls us ahead as readers in the riveting genre of nonfiction.

Ultimately, understanding the intricacies of lightning allows us to expand our knowledge and deepen our connection to the world around us. Embrace the wonders of nonfiction, and let the lightning strike ignite your curiosity!



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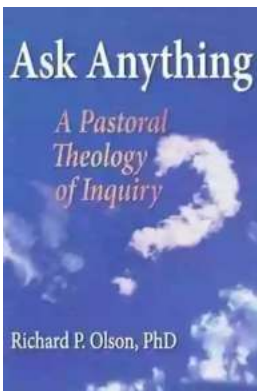
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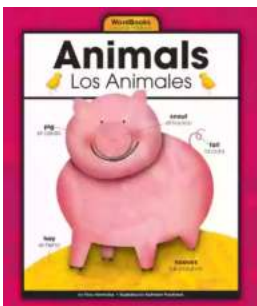


Dramatic photos and simple text describe a lightning storm to emergent readers. Pair this nonfiction title with its companion fiction story, Hiding from Lightning.



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