

Reading Comprehension

Lightning

What Causes Lightning?

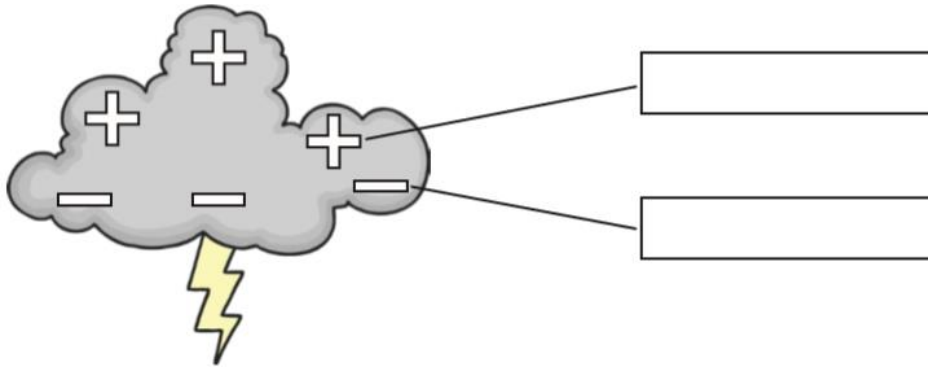
Lightning is caused by the movement of water droplets and ice crystals inside a cumulonimbus cloud (thunderhead) which creates an electrical charge, with the positive charge (protons) forming at the top and the negative charge (electrons) forming at the bottom of the cloud.

A positive charge builds up on the ground beneath the cloud, attracted to the negative charge in the bottom of the cloud. The ground's positive charge concentrates around anything that sticks up - trees, mountains, tall buildings, umbrellas and even people! The positive charge streaming up from the ground connects with the negative charge reaching down from the clouds and a spark of lightning strikes.

Amazing Facts about Lightning

1. A lightning bolt is about 29,000 degrees Celsius — roughly six times hotter than the surface of the Sun!
2. Lightning flashes more than 3 million times a day worldwide — that's about 40 times a second. Not all those flashes hit the ground — some happen between or inside clouds.
3. An average lightning bolt can release enough energy to operate a 100-watt light bulb for more than three months straight.
4. All that energy travels along a path about as wide as a thumb!
5. Lightning kills about 2000 people a year, so stay inside during lightning storms! The determining factor on whether a particular flash could be deadly depends on whether a person or animal is in the path of the lightning discharge.
6. You can use thunder to tell how far away a storm is. Next time you see a storm, count the number of seconds between when you see the lightning and hear the thunder. Take the number of seconds and divide by 5 and that will tell you how far away the storm is in miles. For example: If you counted 10 seconds between the lightning and the thunder, the lightning is 2 miles away!

Fill in the correct labels on the cloud.



Why is it dangerous to be near trees, mountains and tall buildings during a thunder storm?

How hot are lightning bolts?

If you counted **30 seconds** between when you saw the lightning and heard the thunder, how far away would the storm be?

Write and order, **in the table below**, the types of lightning according to **how often** they happen.

Ball

Intra-cloud

Cloud-to ground

Type of Lightning	Frequency
	1-Most Often
	2
	3-Least Often

What is the name given to the type of cloud which causes lightning?

'Hissing noises originate from such balls and they sometimes make a loud noise when they explode.'

In this sentence, the word **originate** is closest in meaning to...

Tick one

shoot

develop

are heard

What are the two key things you need to do to stay safe if you hear thunder?

1. _____

2. _____