



THUNDER AND LIGHTNING

by Lanny and Marilyn Johnson

At the end of a pleasant hike, a fast-moving thunderstorm rolled towards the Jones family. As they hurried into their cabin, there was a bright flash of lightning. This was followed a few seconds later by a loud crack and boom. Billy and Mary both jumped and let out a terrified scream.

“Wow, that is the closest I’ve ever been to a lightning strike,” Mr. Jones exclaimed as he quickly shut the door behind them.

“I’m scared!” Billy sobbed

“It’s okay, Billy. Here inside the cabin we are safe from the lightning,” Mrs. Jones comforted.

Shaking but curious, Mary asked her dad, “I know that lightning comes from the clouds, but what makes it?”

“Lightning is a gigantic electrical spark. It’s like when you drag your feet across the carpet, then touch something and get a shock - only way more powerful. Inside a thundercloud are many small water droplets and bits of ice. These crash into each other as they move around in the air. These collisions create electrical charges. Some of these charges are positive (*protons*) and others are negative (*electrons*). The positive charges collect at the top of the cloud and the negative charges gather at the bottom. When too many

negative charges build up, positive charges build up on the ground to balance the negative ones. The ground’s positive electrical charges usually gather around anything that sticks up, such as a tree, a mountain, a tall building, or people. Opposite charges attract, so the negative charges in the cloud want to join the positive charges on the ground. As the cloud’s negative current

heads toward the ground, the ground’s positive current jumps from the ground to join it. When the currents meet – zap – a bright lightning bolt is created. Not only can lightning happen from clouds to the ground but also inside clouds, and between clouds.”^{1,2,3}

Billy jumped as he heard another boom. “What makes that loud noise?” he cried out.

“That boom is called thunder and is caused by the lightning,” Mr. Jones answered. “As a bolt of lightning races to the ground its electricity quickly heats the air to around 54,000 degrees Fahrenheit (29982 degrees Celsius). This is 6 times hotter than the sun! When this happens, it causes the air to explode outward creating a channel. Once the light is gone, the air crashes back into the channel and makes a loud sound that we hear as a crack or boom.”^{4,5}

“Some lightning bolts can be seen as much as 100 miles (161 kilometers) away, where thunder can only be heard up to 25 miles (40 kilometers) away. The reason we see lightning before we hear thunder is because light travels much faster than sound! To determine how far

away the lightning storm is from you, count the seconds between the flash of lightning and bang of thunder. Dividing the number of seconds by 5 will give the approximate number



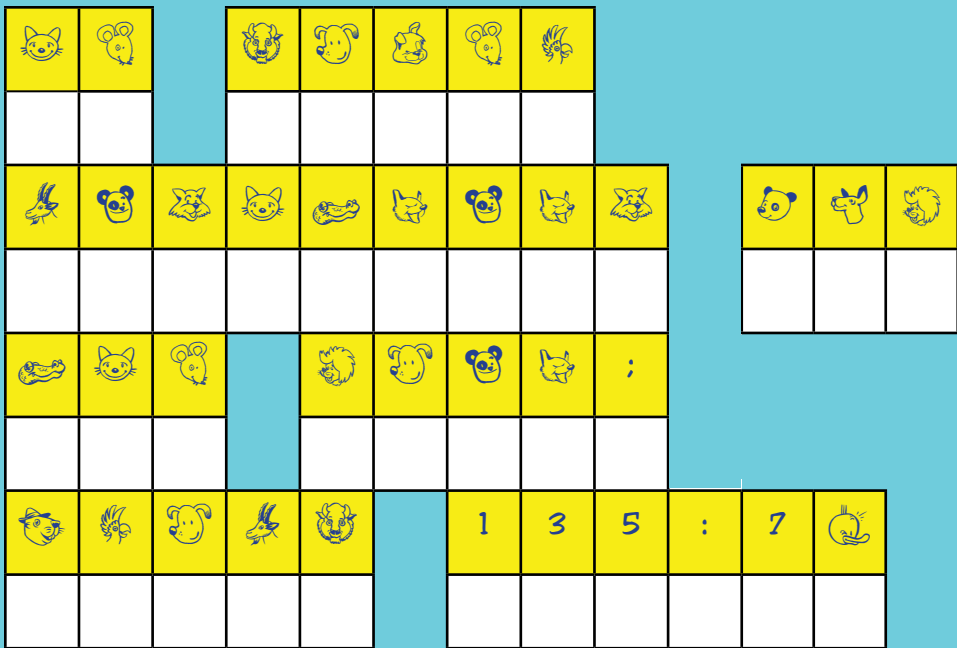
of miles away the lightning struck. For example, if you count 15 seconds between the sound of thunder and the flash of lightning, that means it is about 3 miles (4.8 kilometers) away.^{6,7}

“About 100 lightning bolts strike the earth every second. In the USA, lightning hits the ground about 25 million times a year. Lightning kills between 75 to 100 people each year and injures thousands of others – more than hurricanes and tornadoes. If you hear thunder, you should go to a safe, sturdy building or a car, making sure the windows and doors are shut.”^{8,9}

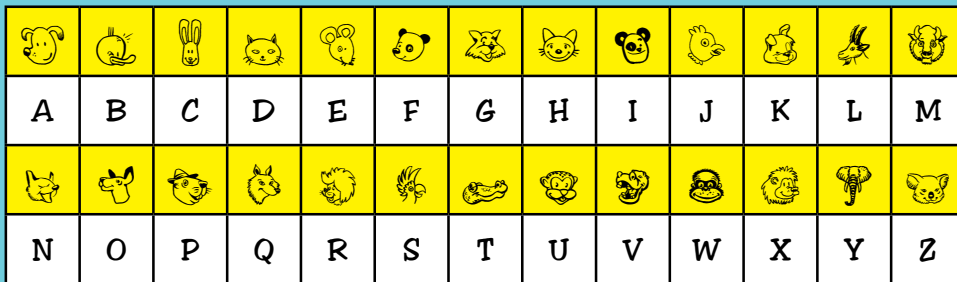
“Even though lightning can be harmful and destructive, there is an important reason for it. Nitrogen is a chemical element that is necessary for all life. It is the third most plentiful chemical in the human body, and it must continually be replaced. When lightning slices through the atmosphere, its electrical energy changes nitrogen into a form that plants can absorb. By eating plants or meat from animals that eat plants, we get the nitrogen we need.”^{10,11}

“Wow! Whenever I see lightning, I’ll have to thank God for the nitrogen He gives us!” Mary exclaimed.

Go to Answers for References



Find the Biblical (NKJV) answer to WHO made LIGHTNING by using the KEY below to solve the secret code hidden in puzzle above.



FOR ANSWERS GO TO: <http://www.discovercreation.org/kids/NewsletterAnswers.htm>

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No need to panic, but you should seek shelter if you see lightning or hear thunder, Find the 18 differences between the 2 pictures.

