

When Lightning Strikes

Thunder provides a wake-up call to head indoors.



World Almanac for Kids

"When thunder roars, go indoors," says meteorologist Ron Holle.

Scientists say lightning strikes the surface of Earth about 100 times each second. Thunderstorms are most frequent during the spring and summer. Experts warn people to be especially aware of the dangers of lightning during those seasons.

Forces of Nature

Lightning is the flash of light that occurs when electricity moves between clouds or between a cloud and the ground. The huge spark of electricity is like the tiny kind you get when you run a comb through your hair or scuff your feet on a carpet—only much stronger.

A lightning bolt that crackles through the air can reach a temperature of 60,000 degrees Fahrenheit. That is about five times hotter than the sun! The intense heat from lightning causes the surrounding air to expand, resulting in the loud sound known as thunder.

Thunder is nature's warning to head indoors. As meteorologist Ron Holle from Tucson, Arizona told *Weekly Reader*, "When thunder roars, go indoors." A meteorologist is a scientist who studies weather.

Holle also recommends following the 30-30 rule. If you hear thunder fewer than 30 seconds after

you see lightning, head indoors-the storm is only about 6 miles away. After the storm ends, wait 30 minutes before going outside. To determine how far away lightning is, count the seconds between the flash and the thunder. Every 10 seconds equals 2 miles.

Play It Safe

Lightning strikes the ground in the United States about 25 million times each year! Although getting hit by lightning is unlikely, it is important to stay safe. In the United States, about 60 people are killed each year by lightning.

To stay safe, follow the golden rule-head for cover. "There is no place outside that is safe from lightning," Holle said firmly. "There are two safe places-inside a [permanent] building or a metal-topped vehicle."

Lightning Safety Tips

Lightning expert Ron Holle shared the following tips with *Weekly Reader*:

- Find shelter in a building or a metal-topped vehicle (not a convertible), and close the windows.
- If you're caught outdoors, stay away from open spaces, and avoid standing near tall objects, such as trees.
- Avoid using electrical equipment, such as computers, TVs, and phones. (Cell phones are safe to use.)
- Stay away from sinks and showers. Lightning can travel through water pipes.
- Wait 30 minutes after the last sound of thunder or flash of lightning before going outside.

intense in · tense**Advanced Definition****adjective**

1. having an extreme degree of something, such as heat, or existing in an extreme degree or state.

A laser gives out an intense light.

2. strong, as feelings or emotions.

Their faces showed an intense hatred.

3. strong or profound in effect.

The fallen soldiers suffered intense pain.

Spanish cognate

intenso: The Spanish word *intenso* means intense.

These are some examples of how the word or forms of the word are used:

1. But **intense** fear can make you sweat.
2. Growing pains can cause **intense** muscle aches in your legs.
3. In summer 2005 the situation grew more **intense** as workers began clearing the land.
4. The fighting was so **intense** at Devil's Den that the area was littered with corpses.
5. The mission was as **intense** as Sonia Mia had hoped. What was her favorite part? The liftoff!
6. The **intense** heat from lightning causes the surrounding air to expand, resulting in the loud sound known as thunder.
7. The mood of his pieces reflected his sadness about the war. The "Black Paintings" of Goya are very **intense**. They have violent themes and dark colors.

Name: _____ Date: _____

1. What is the golden rule of lightning safety?

- A. Don't stand under trees.
- B. Avoid using electronics.
- C. Stay away from open spaces.
- D. Head for cover.

2. What does the author describe at the end of the passage?

- A. how to stay safe from lightning
- B. how lightning is created
- C. how thunder is created
- D. what a meteorologist is

3. The time between a lightning strike and thunder indicates the distance of the storm.

What evidence from the passage supports this conclusion?

- A. "Thunder is nature's warning to head indoors."
- B. "Count the seconds between the flash and the thunder. Every 10 seconds equals 2 miles."
- C. "Wait 30 minutes after the last sound of thunder or flash of lightning before going outside."
- D. "If you hear thunder fewer than 30 seconds after you see lightning, head indoors."

4. "Find shelter in a building or a metal-topped vehicle (not a convertible), and close the windows."

Based on this safety tip, what can you conclude about the safety of cars during lightning?

- A. All cars, regardless of type, will protect you from lightning.
- B. Cars are less safe than buildings during lightning.
- C. The rubber tires of a car protect you from lightning.
- D. The metal roof of a car protects you from lightning.

5. What is this passage mostly about?

- A. why lightning storms are dangerous
- B. the relationship between thunder and lightning
- C. facts about lightning and safety tips
- D. how meteorologists study the weather

6. Read the following sentence: "The intense heat from lightning causes the surrounding air to expand, resulting in the loud sound known as thunder."

What does the word "resulting" mean?

- A. to allow someone to do something
- B. to become smaller
- C. to make a quiet noise
- D. to cause something to happen

7. Choose the answer that best completes the sentence below.

It is important to stay safe during thunderstorms, _____ it is unlikely that you will be struck by lightning during your lifetime.

- A. initially
- B. moreover
- C. in summary
- D. even though

8. Define lightning.

9. What is the 30-30 rule?

10. Explain how the timing between lightning and thunder can help you stay safe during a thunderstorm.

Name: _____ Date: _____

1. In the paragraph header under the title of the passage, it says that thunder provides a "wake up call". That means thunder

- A. wakes people up.
- B. is really loud.
- C. is a warning.
- D. follows lightning.

2. The author wrote this

- A. to teach people what to do when there is a thunderstorm.
- B. to keep people safe.
- C. to inform people about lightning and thunder.
- D. all of the above.

3. The author included the box at the end of the passage to

- A. summarize the article.
- B. provide the reader with information on Ron Holle.
- C. provide tips for staying safe during lightning storms.
- D. give the reader his opinion on lightning.

4. The author probably interviewed Ron Holle for this passage because

- A. they are good friends.
- B. Ron Holle is an expert.
- C. Holle was struck by lightning.
- D. Holle lives in Arizona.

5. What are three lightning safety tips?

Name: _____ Date: _____

1. What is a meaning of the word **intense**?

- A. extreme in size or strength
- B. made into a circle or sphere
- C. lowest in rank or importance

2. What is another meaning of the word **intense**?

- A. in words
- B. absolved
- C. strained

Please use each answer choice only once. Choose the one word that best completes the sentence.

3. I did not like to feel _____ and fear.

- A. intensive
- B. tense
- C. tensions
- D. intensely
- E. intensity
- F. tension
- G. intensified
- H. intense

4. Get ready for high speeds, big thrills, and _____ action.

- A. intensive
- B. tense
- C. tensions
- D. intensely
- E. intensity
- F. tension
- G. intensified
- H. intense

5. Snarling, baring teeth, and a _____, crouched body with the tail down show anger.

- A. intensive
- B. tense
- C. tensions
- D. intensely
- E. intensity
- F. tension
- G. intensified
- H. intense

6. The _____ of the darkness seemed to oppress and stifle me.

- A. intensive
- B. tense
- C. tensions
- D. intensely
- E. intensity
- F. tension
- G. intensified
- H. intense

7. The _____ reading provides the information from which the paper will be written.

- A. intensive
- B. tense
- C. tensions
- D. intensely
- E. intensity
- F. tension
- G. intensified
- H. intense

8. The _____ between Britain and the colonies soon escalated to conflict.

- A. intensive
- B. tense
- C. tensions
- D. intensely
- E. intensity
- F. tension
- G. intensified
- H. intense

9. Americans _____ debated the provisions of the new Constitution.

- A. intensive
- B. tense
- C. tensions
- D. intensely
- E. intensity
- F. tension
- G. intensified
- H. intense

10. The rain of the last three days had _____ the ugly odor.

- A. intensive
- B. tense
- C. tensions
- D. intensely
- E. intensity
- F. tension
- G. intensified
- H. intense

11. Please write your own sentence using the word **intense**.

12. What would you like to remember about the meaning of the word **intense** so that you can use it when you write or speak?
