

What Scientist Know About Thunder and Lightning



- 1 Many of us have experienced the awesome power of thunderstorms. Thunderstorms are caused by the buildup of huge thunderclouds. Thunderclouds can reach up to 12 miles into the sky. They have enough energy to keep the lights on in a small community for a year.
- 2 Ice and water particles build up in the thunderclouds. The ice and water **particles** bump into each other violently. These **collisions** of particles cause an electrical charge. When the charges connect with electrical charges on the ground lightning strikes.
- 3 When lightning flashes it heats the air. It makes a hole in the air called a channel. When the lightning is gone the hole collapses. This causes the loud sound we know as thunder. You can hear thunder from miles away!
- 4 Lightning kills more people every year than tornadoes or hurricanes. About a 100 people die each year by lightning strikes. Stay away from trees and water during a thunderstorm with lightning. The best thing you can do is seek shelter immediately.

WORD RECOGNITION, STRUCTURE, AND VOCABULARY

•Knowledge of letter-sound relationships to say written words

•Use context clues to figure out what a word means.

•Recognize common word relationships and structures

1

Read the sentence from paragraph 2.

The ice and water **particles** bump into each other violently

What does particles mean in the sentence above?

1. Move quickly
2. violently
3. types of clouds
4. tiny pieces of matter

2

Read these sentences from paragraph 2.

The ice and water particles bump into each other violently. These **collisions** of particles cause an electrical charge.

What does collisions mean above?

1. Striking violently against each other
2. Climbing high in the air
3. Changing direction
4. Creating light and sound

READING INFORMATIONAL TEXT: KEY IDEAS, READING FOR UNDERSTANDING

•Read and understand non-fiction texts

•Make inferences and predictions and draw conclusions

•Summarize reading

•After reading the text, I can determine key ideas

•Analyze how arguments develop

3

Based on the article, thunder is produced by -

1. Collisions of particles
2. Energy produced in communities
3. Lightning striking an object
4. Holes from lightning collapsing

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4

Thunderclouds have enough energy to -

1. To create electricity for large cities.
2. To keep the lights on in a small community for one year.
3. To heat the planet earth.
4. To produce earthquakes.

5

In an Internet search about thunderstorms, which title would suggest the best information about lightning?

thunderstorms



- | | |
|--------------------------|---|
| 1. Severe weather 101 | 1. SEVERE WEATHER 101 Thunderstorm Basics
www.nssl.noaa.gov/education/svrwx101/thunderstorms ▼
Severe Weather 101 Thunderstorm Basics. What we do: Read more about NSSL's thunderstorm research here. What is a thunderstorm? A thunderstorm is a rain shower during ... |
| 2. Thunderstorms - Facts | 2. Thunderstorms - Facts about Thunderstorms for Kids - Weather ...
www.weatherforkids.org/thunderstorms.html ▼
Thunderstorms . What is a thunderstorm? A thunderstorm is a storm where you hear thunder and see lightning. Usually there is heavy rain in a thunderstorm. |
| 3. Thunderstorms and | 3. Thunderstorms & Lightning Ready.gov
www.ready.gov/thunderstorms-lightning ▼
Facts about Thunderstorms . They may occur singly, in clusters or in lines. Some of the most severe occur when a single thunderstorm affects one location for an ... |
| 4. How do Thunderstorms | 4. How Do Thunderstorms Form?
eo.ucar.edu/kids/dangerwx/tstorm4.htm ▼
Supercell thunderstorms occur when very strong updrafts are balanced by downdrafts. This can allow the storm to persist for many hours. |
| 5. NSSL Research: | 5. NSSL Research: Thunderstorms
www.nssl.noaa.gov/research/thunderstorms ▼
NSSL Research: Thunderstorms . There can be as many as 40,000 thunderstorms each day around the world. They are most common in the U.S., where they can produce ... |

6

Which questions are answered in the article?

- | | |
|---|-------------------------------------|
| 1. What causes lightning? | 3. Can thunder damage your hearing? |
| 2. Where do most lightning strikes occur? | 4. What causes thunder? |

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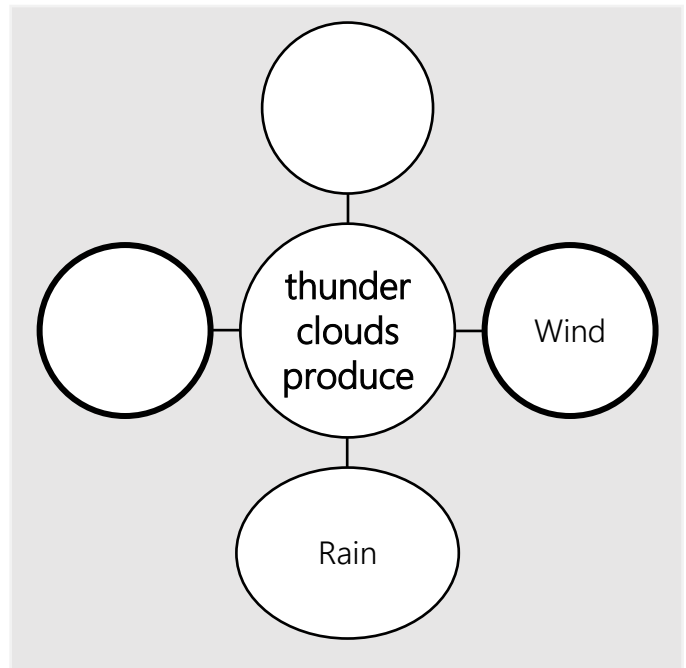
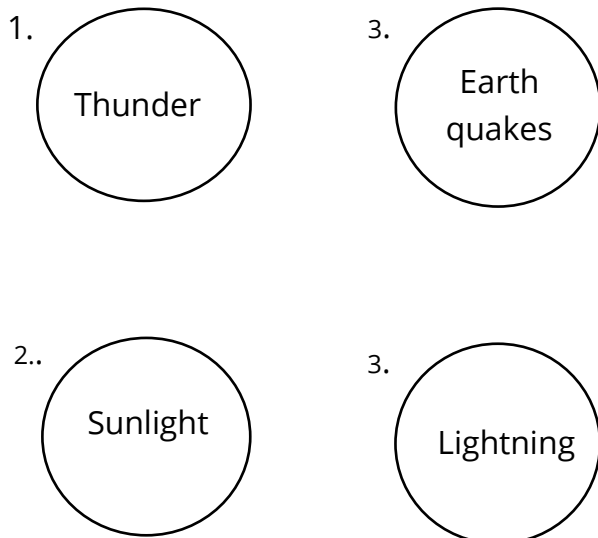
7

After reading “What Scientists Know About Thunder and Lightning,” the reader can conclude that -

1. Thunder is dangerous and causes death.
2. Scientist do not know what causes lightning and Thunder.
3. Thunder and Lightning are produced in Thunder clouds.
4. Thunder and lightning occur more frequently in the United States.

8 Write the correct numbers in the blank bolded circles below.

Use the article to help you complete the web.



READING INFORMATIONAL TEXT: CRAFT, STRUCTURE, EVALUATION

- Analyze the structure of texts
- Evaluate the author's tools and techniques used to craft a story
- Author's purpose

9

The author wrote this article most likely to -

1. To make us laugh
2. To inform us about the dangers facing our planet
3. To help us understand what causes thunder and lightning
4. Tell us how to avoid tornados and hurricanes

NON-FICTION STORY “What Scientist Know About Thunder and Lightning”
Student Self-Evaluation Sheet
 NWEA MAP READING PRACTICE
 (RIT 181-190)

STUDENT SELF EVALUATION SHEET

?	STRAND/SKILL	CORRECT		I NEED MORE PRACTICE WITH...
1	Use context clues to figure out what a word means.	YES	NO	
2	Use context clues to figure out what a word means.	YES	NO	
3	Read and understand non-fictional texts	YES	NO	
4	After reading the text, I can determine key ideas	YES	NO	
5	Make inferences and predictions and draw conclusions	YES	NO	
6	Make inferences and predictions and draw conclusions	YES	NO	
7	Make inferences and predictions and draw conclusions	YES	NO	
8	Read and understand non-fictional texts	YES	NO	
9	Evaluate the author’s tools and techniques used to craft the story.	YES	NO	

NON FICTIONAL STORY “What Scientist Know About Thunder and Lightning”

Teacher Answer Sheet

NWEA MAP READING PRACTICE

(RIT 181-190)

?	STRAND/SKILL	ANSWERS	I NEED MORE PRACTICE WITH...
1	Use context clues to figure out what a word means.	4	
2	Use context clues to figure out what a word means.	1	
3	Read and understand non-fictional texts	4	
4	After reading the text, I can determine key ideas	2	
5	Make inferences and predictions and draw conclusions	3	
6	Make inferences and predictions and draw conclusions	1 and 4	
7	Make inferences and predictions and draw conclusions	3	
8	Read and understand non-fictional texts	1 and 3	
9	Evaluate the author’s tools and techniques used to craft the story.	3	