Name:_____ Date:_____

# What is an Ice Storm?

Hazardous weather is considered an act of nature or extreme weather-related conditions that can cause damage to people, animals, and objects, like buildings. Ice storms are an example of hazardous or severe weather.

An ice storm is a weather **phenomenon** caused by freezing rain. The freezing rain falls and contacts outside surfaces, turning the rain into sheets of ice. According to the US National Weather Service, an ice storm is a winter storm that **accumulates** at least .25 inches of ice. An ice storm is not a blizzard. Blizzards are also dangerous winter storms but are characterized by falling snow, not ice. For a storm to be called a blizzard, it must have falling and blowing snow, winds of at least 35 MPH, and visibility of ¼ mile or less. This means that you cannot see far in front of you, making it difficult to drive or even walk. Blizzards cause snowdrifts and power outages and are formed when two different air masses of different temperatures and moisture clash.

Ice storms often take place during December and January. These types of storms are often referred to as non-violent. This is because the **precipitation** that falls is gentle rain that turns into ice. Freezing rain occurs when a warm layer of air develops right above a layer of below-freezing air. As the frozen precipitation falls from the clouds right above the warm layer of air, it melts. As that same precipitation begins to travel through the cold layer of air right below it, it refreezes. If the precipitation refreezes while still in the air, it will land on surfaces as sleet. However, if the liquid precipitation continues to fall without freezing, the droplets will pass through the cold air and be cooled but not frozen. This phenomenon is called supercooling. When these supercooled drops touch the ground or any object below

## Glossary

*accumulate* – to slowly gather or build up
*phenomenon* – an astonishing situation that happened, with its cause or explanation in question
*precipitation* – when rain, snow, sleet, or hail falls to the ground

Name:_____ Date:_____

# What is an Ice Storm?

32 degrees Fahrenheit, a layer of ice builds up called freezing rain.

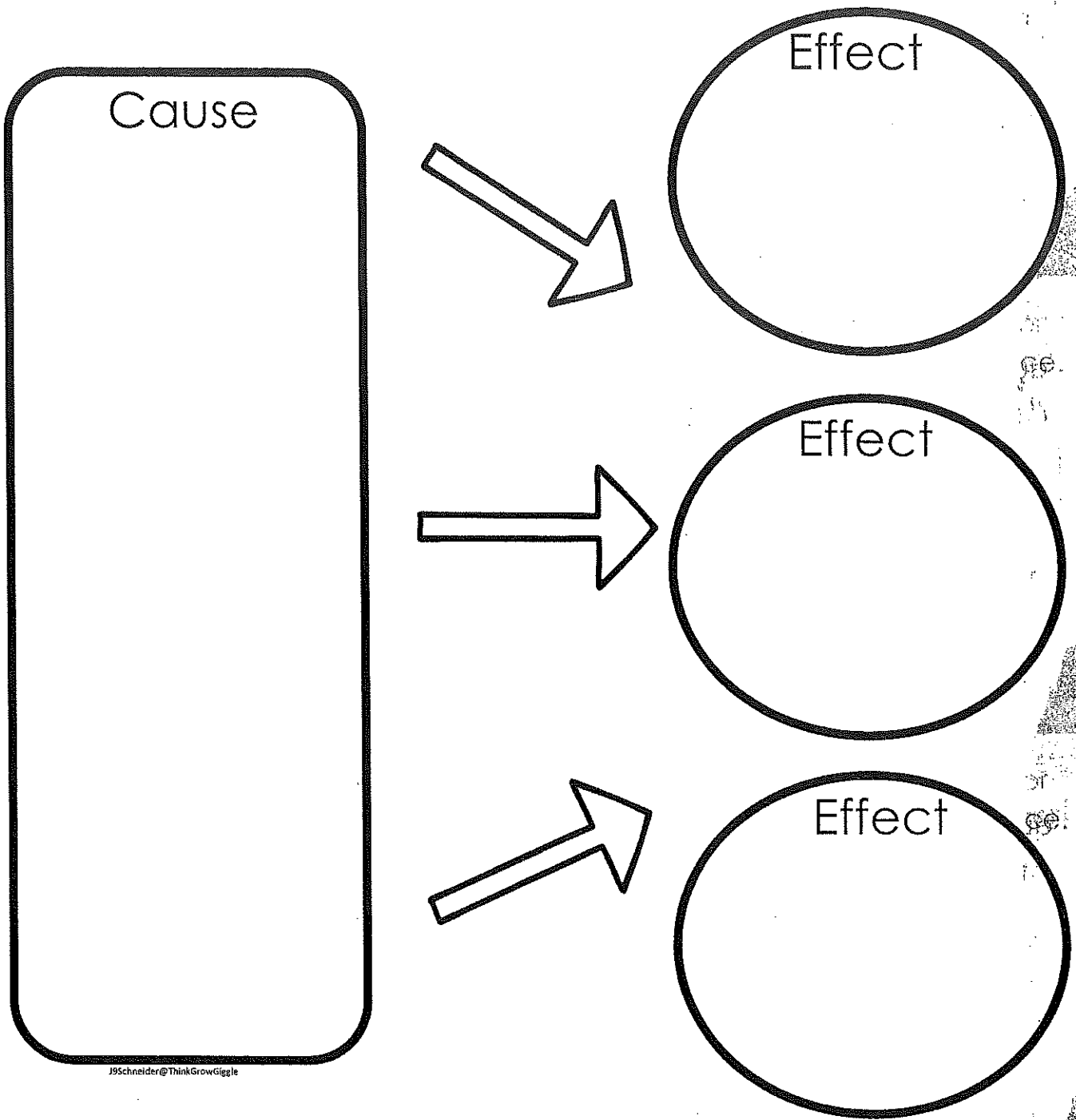
Freezing rain from ice storms covers everything with smooth and heavy ice. The ice that falls is so hard and heavy it can split trees in half, take down large branches, and cause powerlines to crash. This is because just ¼ inch of ice can add up to 500 pounds of weight per power line. People could be without power for weeks when power lines are down and damaged. In fact, the ice storm of 1998 that stretched from Canada to New England caused about four million homes and businesses to be without power for extended periods of time ranging from weeks to months. The damage was so extensive that cities shut down, and travel was banned. Maple tree farms in Canada had such extensive damage caused by ice that it was estimated that it would take up to forty years for them to recover.

When there is an ice storm, it is best to stay home. Roads become very dangerous during ice storms. The sidewalks and pavement become a sheet of ice, making it very dangerous to walk or drive on while frozen. Watch the news during an ice storm or any hazardous weather condition and be prepared. The National Weather Service will issue a watch, warning, or advisory to help you to stay safe. A watch means that a storm is coming, but the details are unclear, a sign means that hazardous weather is on its way or occurring and to take shelter. An advisory means that dangerous weather is happening and to use extreme caution. It is important to stay safe during winter storms. *How can you best be prepared for a winter storm?*

Name:_____ Date:_____

# What is an Ice Storm?

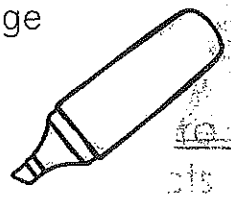
***Cause and Effect*** is a relationship between events. Sometimes there is more than one effect from a single cause. Think about the effects of an ice storm and complete the graphic organizer below using information from the text.



Name:_____ Date:_____

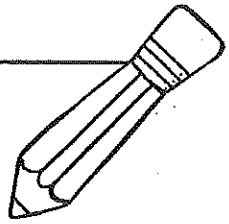
# Time To Reflect

Directions: Read the passage two times. After you read the passage the second time mark the text by following the directions below. Check off each box as you complete the task.



- ☐ Highlight a sentence that tells when ice storms typically occur.
- ☐ Highlight a sentence that explains how freezing rain is formed.
- ☐ Highlight a sentence that tells a reason why ice storms are dangerous.

Directions: Read the passage two times. After you read the passage the second time respond to the questions below using complete and detailed sentences.



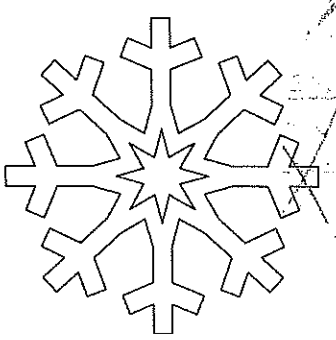
Explain why an ice storm is considered hazardous weather.

Which do you think is more dangerous a blizzard or an ice storm? Why? Explain.

Name:_____ Date:_____

# What is an Ice Storm?

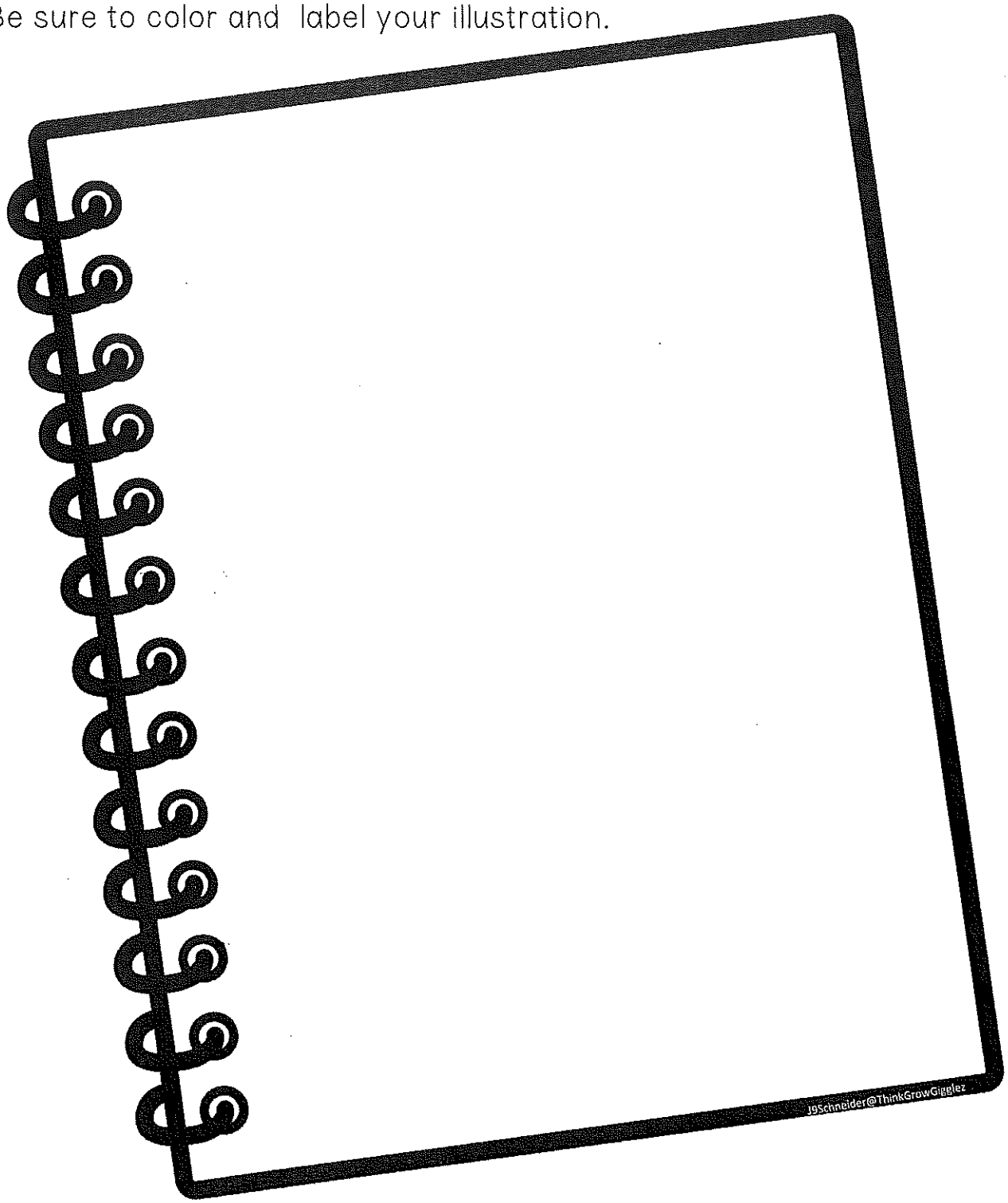
Directions: Think about the information that you read about ice storms and blizzards. How are they the same? How are they different?



Name:_____ Date:_____

# VISUALIZING FREEZING RAIN

Freezing rain occurs when there is a warm layer of air that develops right above a layer of below freezing air. In your field notebook below, create an illustration that shows what you visualized as you read about freezing rain. Be sure to color and label your illustration.



Name:_____ Date:_____

# A Brilliant Idea!

When ice storms occur they cause serious damage. It is important to be prepared and stay safe. Create an invention that will help people stay safe during an ice storm. Illustration your invention below and tell about how it works.



Tell about your idea to help during an ice storm.

_____

_____

_____

_____

_____

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