

PRACTICE THE TASK

How are hurricanes and tornadoes alike and different?

**You will read:**

- ▶ **AN INSTRUCTIONAL ESSAY**
What Is . . . Comparison-and-Contrast Organization
- ▶ **A MAP**
Hurricanes and Tornadoes in the U.S.
- ▶ **TWO INFORMATIONAL TEXTS**
What You Should Know About Tornadoes
Basic Facts About Hurricanes

You will write:

- ▶ **AN INFORMATIVE ESSAY**
How are hurricanes and tornadoes alike and different?

Source Materials for Step 2

AS YOU READ You will be writing an informative essay that describes the similarities and differences between hurricanes and tornadoes. Carefully study the sources in Step 2. As you read, underline and circle information that you may cite as textual evidence when you write your essay.

Source 1: Instructional Essay

What Is ...

Comparison-and-Contrast Organization

by Moira McCarthy

When you write an informative essay, you need to consider your topic and select the best way to organize your information. For instance, if you wanted to examine the reason why a particular event takes place, you might use cause-and-effect organization.

To analyze the similarities and differences between two subjects, you will want to use comparison-and-contrast organization. In the essay you are going to write, you will analyze the similarities and differences between hurricanes and tornadoes. Remember to discuss the same aspects of both: If you discuss the areas affected by hurricanes, you must also remember to discuss the areas affected by tornadoes.

You can refer to the framework on the right for your comparison-and-contrast essay.

Framework for a Comparison-and-Contrast Essay

Introduction

A clear statement of your subjects and your main idea about how they are alike or different

Body

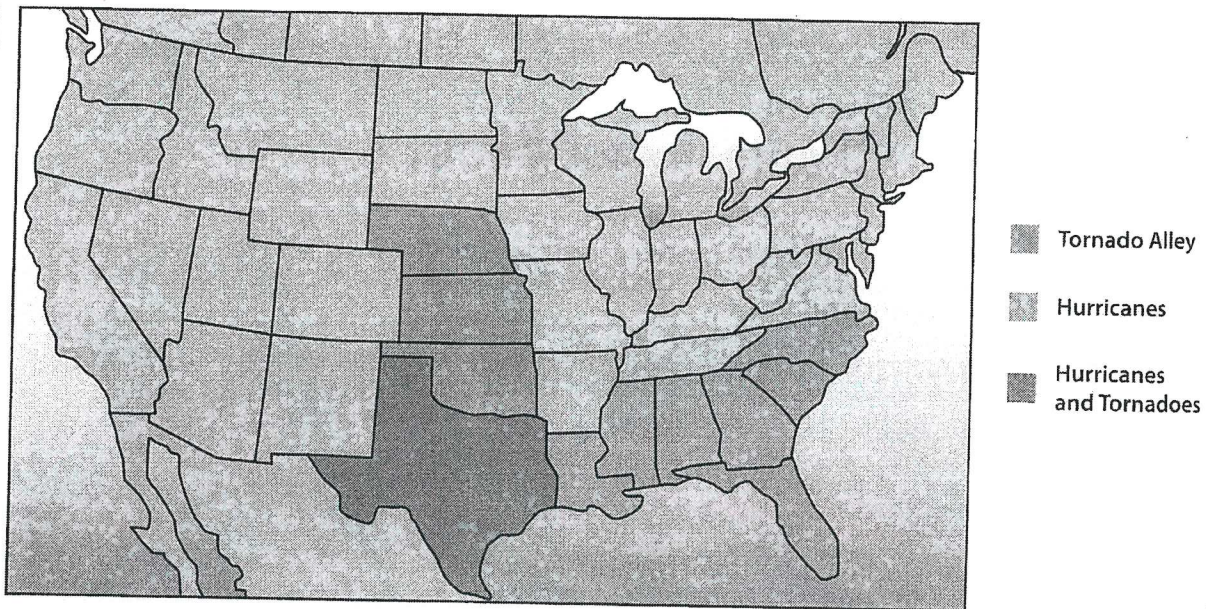
The two or three most important similarities or differences

Conclusion:

Summary of your main idea, noting its importance or usefulness

Source 2: Map

Hurricanes and Tornadoes in the U.S.



About 1,300 tornadoes hit the U.S. each year, with a total average cost of \$500 million in damages. In an average three-year period, roughly five hurricanes strike the U.S. coastline, causing annual damage of about \$15 billion.

Tornadoes

“Tornado Alley” is an informal term that describes the area in the United States where the strongest tornadoes occur most frequently—particularly northern Texas, Oklahoma, Kansas, and Nebraska. Other states greatly affected by tornadoes include Arkansas, Louisiana, Mississippi, Alabama, Tennessee, and Georgia.

Hurricanes

In the United States, communities located in the South Atlantic and Gulf states (Texas, Louisiana, Mississippi, Alabama, and Florida) are the most vulnerable to hurricanes. Residents in these areas are likely to get advanced warnings about approaching hurricanes to allow them to seek shelter before hurricanes strike.

Source 3: Informational Text

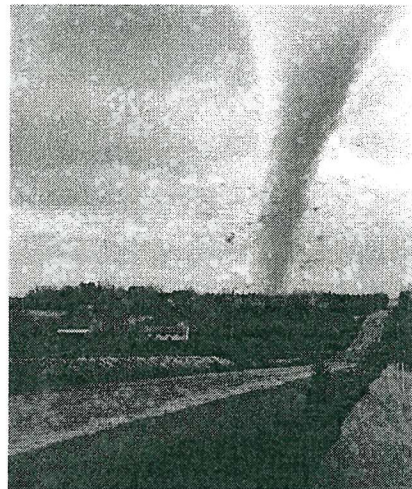
AS YOU READ Notice the relationship between the headings and the content of the paragraphs in Sources 3 and 4. They may give you a hint at possible points of comparison.

What You Should Know About Tornadoes

by Sheldon Hammond

SHAPE AND PHYSICAL DESCRIPTION

Tornadoes are rapidly spinning columns of air that extend from the sky and touch the ground. A tornado can be described as *cyclonic* because of the way its winds rotate. In the Northern Hemisphere, tornadoes spin counterclockwise, but in the Southern Hemisphere tornadoes rotate clockwise. Frequently visible as giant cones, the tornado's narrow point may appear to touch the ground while the wider part is at the top of the column.



SIZE VERSUS IMPACT

As you can tell from their cone-like appearance, tornadoes' point of contact with land is relatively small. Most tornadoes are only a few hundred feet across, with winds reaching one hundred miles an hour. They can remain on the ground for miles. Some exceptionally large tornadoes stretch a few miles across, stay on the ground for many miles, and have winds that exceed 300 miles an hour. Some tornadoes can even have more than one point—destroying one house and leaving the next virtually untouched.

PREDICTABILITY PROBLEMS

While meteorologists are able to identify storms that are likely to bring tornadoes with them, there is no way to predict exactly where or if a tornado will make landfall or how powerful its winds will be. It is a tornado's high wind speeds that present a difficult, almost unsolvable problem to residents living in a tornado zone.

WHERE ON EARTH?

Every continent with the exception of Antarctica has been visited by tornadoes. However, the majority of tornadoes occur in North America. They are common throughout the United States, but are most frequent in the region known as "Tornado Alley." "Tornado Alley" is an area of the Great Plains in the central United States where tornadoes are most frequent.

PROTECTING LIFE AND PROPERTY

One reason relatively few people are killed by tornadoes is that they are often visible in the distance. Most people are able to prepare because their visibility sometimes provides sufficient warning to alert local residents to get to a safe location. However, some tornadoes develop rapidly or may be obscured by clouds and rain, making advance warning difficult. An underground cellar or basement is often the safest refuge during a tornado. What's more, very little can be done to protect property from tornadoes. About 1,300 tornadoes hit the U.S. each year, causing damage to hundreds of homes.

Discuss and Decide

Evaluate whether the essay or the map gives you a better understanding of what parts of the United States face tornadoes.

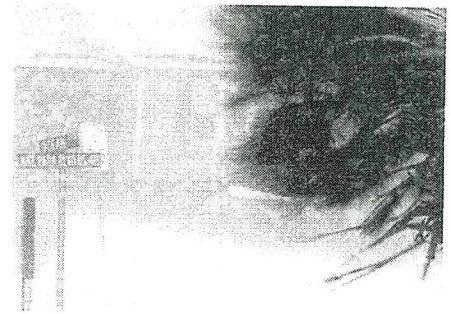
Source 4: Informational Text

Basic Facts About Hurricanes

by Eve Perry

What Qualifies as a Hurricane?

Hurricanes are among the largest, most powerful storms on Earth. All hurricanes form near the equator because they require warm tropical oceans to get their start. To be classified as a hurricane, the wind from a rotating storm must reach at least 74 miles per hour, though the strongest hurricanes will have winds in excess of 150 miles per hour. In the Northern Hemisphere, the winds rotate counterclockwise. In the Southern Hemisphere, they rotate clockwise.



What Causes a Hurricane?

Typical hurricanes are about 300 miles wide, although they can vary considerably in size. Hurricanes are cyclonic. That is, the winds of a hurricane rotate towards the center of the storm. They are fueled by the evaporation of warm ocean waters. The fastest winds of a hurricane are generally nearest the "eye," though in the eye itself, the wind is often not powerful at all. Hurricanes are always at their strongest in warm seas and with atmospheric conditions that allow the storm to rotate tightly around its eye. Hurricanes can be identified by their heavy rains and strong winds that blow objects around.

Hurricanes in the U.S.

Many of the hurricanes that strike the United States form near the African coastline before traveling across the Atlantic Ocean. As they move west, they gain strength. Although many large storms form during hurricane season, in a three-year average, only five make landfall in the United States. Each hurricane can cause billions of dollars in damage. Most hurricanes claim few lives in the United States, but Hurricane Katrina killed over 1,000 people in 2005 and caused roughly 100 billion dollars in damage.

Storm Surges

Besides the damage caused by extreme winds and flooding rains, the high winds can create a “storm surge.” A storm surge occurs when ocean water is blown by the wind onto the shore. This storm surge raises the level of the ocean, which can then destroy everything in its path by flooding beaches, blowing roofs off houses, toppling buildings, flipping cars, and causing massive trees to tumble to the ground like toothpicks. Out to sea, waves generated by hurricanes can be as high as 70 feet and can create disastrous problems for boats and ships.

Warning Time and Predictability

Fortunately most residents of the U. S. have a lot of warning before a hurricane. Anyone likely to experience hurricanes should make it an absolute practice to listen to instruction from the local government, particularly if officials call for an evacuation. It is also important to make sure that you have enough food and water to last several days in case you lose power. Preparations beforehand can help minimize the fatalities and damage caused by hurricanes, so it is important to make use of this advanced warning.

Discuss and Decide

What are three possible points of comparison between tornadoes or hurricanes? Cite text evidence in your response.

Finalize Your Plan

Use your responses and notes from previous pages to create a detailed plan for your essay. Fill in the chart below.

- ▶ Introduce your topic and “hook” your audience with an interesting detail, question, or quotation.
- ▶ Follow a framework like the one shown here to organize your main ideas and supporting evidence.
- ▶ Include relevant facts, concrete details, and other textual evidence to support your points of comparison.

Introduction	
Key Point 1	
Key Point 2	
Key Point 3	
Conclusion	

- ▶ Summarize the key points and restate your main idea.
- ▶ Include an insight that supports your main idea.

Revision Checklist: Peer Review

Exchange your essay with a classmate, or read it aloud to your partner. As you read and comment on your classmate's essay, focus on how clearly tornadoes and hurricanes have been compared and contrasted. Help each other identify parts of the drafts that need strengthening, reworking, or even a complete new approach.

What To Look For	Notes for My Partner
1. Does the introduction grab the audience's attention?	
2. Is it clear what topics are being compared and contrasted?	
3. Is each point of comparison supported by well-chosen and sufficient textual evidence, including facts and concrete details?	
4. Are appropriate and varied transitions used to connect and contrast ideas?	
5. Does the concluding section sum up key ideas? Does it give the reader something to think about?	

Edit



Edit your essay to correct spelling, grammar, and punctuation errors..

