ELA/Literacy
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Grade 07
Research Simulation Task
Our Understanding of Tornadoes
VH069361

Today you will read three texts about tornadoes. As you review these three sources, you will gather information and answer questions about different points of view and purposes regarding tornadoes in order to write an essay.

Read the passage from the book *Tornado!* Then answer the questions.

from *Tornado!*

by Jules Archer

1   Tornadoes blasting over barnyards have stripped chickens of their feathers. Some have snatched blankets and mattresses off beds, leaving sleepers terrified but unharmed. One 1912 tornado plucked a telephone pole out of the ground. Then, as it traveled, it bounced the pole up and down like a pogo stick. In St. Louis in 1896 a tornado drove a two-by-four plank through an iron sheet.

2   One tornado picked up a locomotive from its track. Then it set the engine down facing the other way on the opposite track. In 1974 a tornado in Xenia, Ohio, sucked up hundreds of trees from an orchard. In West Virginia a 1944 tornado passing over the West Fork River sucked the whole river dry. One woman sought to hide from a tornado in a closet under her back stairway. When she opened the door after the storm, she found that the closet and stairway were all that were left of her house!

3   These terrifying windstorms can also perform amazing feats of gentleness. One tornado transported a crate of eggs 500 yards without cracking a single shell. Mirrors have been carried for miles and set down unbroken. One jar of pickles traveled 25 miles with a tornado. Then it was lowered unbroken into a ditch.

4   These exceptions to a tornado's ferocity can be explained. Such objects were lowered through the storm's outer fringes. There, a rising air current let them descend to earth gently.

5   These stories of tornado freakishness might seem unbelievable. But the National Weather Service has confirmed that they're true.

WHAT IS A TORNADO?

6 The name "tornado" originally derived from the Latin word *tonare*, to thunder. This developed into the Spanish word *tornear*, to turn or twist. A tornado begins with the formation of a narrow line of thunderstorm clouds. A loud, thunderous roar is produced by the storm. Because a tornado is formed by rotating, or twisting, air, some people call it a twister or cyclone.

7 A tornado is a powerful column of winds spiraling violently around a center of atmospheric low pressure. In shape it looks like a huge black funnel hanging from a storm cloud. The narrow end sways over the earth. It is like a gigantic anteater sniffing along the ground for ants.

8 A tornado's winds spiral upward and inward with tremendous speed and power. This creates a vacuum in the funnel that exerts a mighty suction effect on anything the tornado passes over. When the funnel strikes any structure, an explosive effect causes it to fly apart.

9 The winds inside a tornado may whirl around the center of the storm at speeds up to 400 and 500 miles an hour. The normal speed, however, is usually about 300 miles an hour. That makes these twisters the most dangerous storms known to mankind. In the Northern Hemisphere, most move eastward, rotating counterclockwise. In the Southern Hemisphere, they rotate clockwise. Tornadoes are often heralded by a rain of hailstones. Some hailstones are the size of tennis balls. The largest on record fell on Coffeyville, Kansas, in 1970. It weighed two pounds.

10 Not every funnel cloud becomes a dangerous tornado. Some never touch down to earth. No one knows why. Those that do may last from a few seconds to a few hours. Some disappear, only to re-form minutes later. The average twister measures 200 to 300 yards across. Some grow large enough to spin off smaller tornadoes, like storm children.

11 These satellite tornadoes can be fierce. Measuring from 50 yards across, they swirl violently around the main funnel. They can do terrible damage. Satellite tornadoes also often branch away. They may take separate paths through a countryside.

12 A tornado can form suddenly—in a minute sometimes. It can dart across the land with great speed, then abruptly vanish. In a matter of seconds, it can kill dozens of people. Each year tornadoes destroy half a billion dollars' worth of property in the United States.

13 A Kansas farmer named Will Keller looked directly up into a tornado from his storm cellar near Greensburg on June 22, 1928. He described a circular opening in the center of the funnel, between 50 and 100 feet in diameter. It extended straight up for half a mile. Its walls were spinning clouds. Flashes of lightning let him see into the tornado. He watched small tornadoes constantly form and break away with hissing, snakelike sounds.

14 Tornadoes are by far nature's most violent and damaging windstorms. No other country has as many as the United States. This is caused by the unique clash of arctic and tropical winds that occurs over the middle states. Each year approximately 850 tornadoes touch down.

From TORNADO!: NATURE'S DISASTERS by Jules Archer. Copyright © 1991 by Crestwood House. Reprinted with permission of Michael Archer.

Read the article "Measuring Tornadoes." Then answer the questions.

Measuring Tornadoes

by Chris Kridler

1 Though we can look at a tornado and see how big it is, we can't measure its strength by sight. Instead, scientists often use the F-scale, or **Fujita scale**, to measure how strong tornadoes are.

Rating	Original Fujita Scale		Enhanced, Operational Fujita Scale
Rating	**Characteristics**	**Wind Speed Estimate (sustained gust)**	**Wind Speed Estimate (3-second gust)**
F0 gale tornado	Some damage to chimneys; breaks branches off trees; pushes over shallow-rooted roofs; damages sign boards.	40–72 mph	65–85 mph
F1 moderate tornado	Lower limit is beginning of hurricane-force winds. Peels surface off roofs; mobile homes pushed over; moving autos pushed off roads.	73–112 mph	86–110 mph
F2 significant tornado	Roofs torn off frame houses; mobile homes demolished; boxcars pushed over, large trees snapped or uprooted; light-object missiles generated.	113–157 mph	111–135 mph
F3 severe tornado	Severe damage. Roofs and some walls torn off well-constructed homes; trains overturned; most trees in forest uprooted; heavy cars lifted off the ground and thrown.	158–206 mph	136–165 mph
F4 devastating tornado	Well-constructed homes leveled; structures with weak foundations blown off some distance; cars thrown and large missiles generated.	207–260 mph	166–200 mph
F5 incredible tornado	Phenomenal damage. Strong frame homes disintegrate or lifted off foundations and carried considerable distance; trees debarked.	261–318 mph	over 200 mph

2 The theoretical scale conceived by the late Dr. Ted Fujita of the University of Chicago would have gone up to F12—but anything above F5 was considered impossible. That is why the scale only goes up to 5.

3 The scale is a decent guideline to help us classify tornadoes, but it hasn't always been useful. Because ratings on the scale are determined by damage to structures, a tornado that rips through a field will not get much of a rating, no matter how big it is.

4 The strongest tornadoes, such as the F5 that hit the Oklahoma City area on May 3, 1999, suggested that wind estimates were too high in the scale, according to the National Weather Service. Effective Feb. 1, 2007, meteorologists began to use a new, enhanced Fujita scale. Ratings are determined with 28 <u>damage indicators</u>, which apply to structures from barns to shopping malls.

5 Only about 1 percent of all tornadoes have fallen into the most violent categories—F4 or F5. But even a weak tornado can turn over your car or damage a mobile home. That's why it's important to seek shelter in a sturdy structure when a tornado is approaching.

Glossary
The damage indicators are used to determine which rating on the Fujita scale (F0–F5) applies to a tornado.

Read the article "New Alert System Designed to Warn Residents of Storms and Other Dangers" about a new emergency warning system being used in Lake County, Florida. Then answer the questions.

New Alert System Designed to Warn Residents of Storms and Other Dangers

by Stephen Hudak

1 TAVARES—On the heels of a tornado-like windstorm that socked Groveland, Lake's emergency manager has announced the launch of an improved warning system designed to issue weather alerts and other critical notices.

2 "This is an advance for Emergency Management to be able to notify the public of any impending danger," said Jerry Smith, Lake's emergency management director, who outlines the new system's capabilities.

3 The new system, financed by grants totaling nearly $130,000, allows public-safety officials to send warning and law-enforcement advisories to home phones and to mobile phones registered with the county.

4 Lake's previous system could not send alerts to mobile phones.

5 The new alert system was online recently and dispatched tornado warnings to residents in east Lake but not in the Groveland area because of a technical glitch that has since been corrected, Smith said.

6 Those who received the tornado warning over the phone were told: "This is an emergency message from Lake County Emergency Management. The National Weather Service has issued a tornado warning for your area. Take immediate action and shelter. Monitor your favorite local media outlet for additional weather updates."

7 Groveland was hit hard Jan. 25 by a storm that toppled trees and damaged 30 homes in an area that included Ashley Street, Catherine Lane and Stina Avenue. No injuries were reported, but property damage was estimated between $500,000 and $1 million.

8 Thomas Carpenter, emergency management operations manager, said the alerts that were dispatched were sent out by a weather station outside of

Florida and not the Melbourne station. He said the system is now tied into the Melbourne station.

9 The Federal Emergency Management Agency provided the grant funding for the system in the wake of deadly tornadoes that spun through Lake on Feb. 2, 2007, killing 21 people in Lady Lake and Lake Mack.

10 Carpenter said the telecommunications-based system is preferable to sirens, which can be ineffective in heavily wooded areas like Lake and muffled by noise-cancelling designs of some homes and new cars.

11 The new system can be triggered in response to threatening storms, hazardous spills, wildfires and important law-enforcement advisories. It also can help county officials warn residents in low-lying areas of flooding dangers.

12 Residents with mobile phones but no land line must register their mobile-phone number with the county to receive alerts.

9. You have now learned about tornadoes by reviewing three sources: the passage from *Tornado!*, the article "Measuring Tornadoes," and the article "New Alert System Designed to Warn Residents of Storms and Other Dangers."

Write an essay explaining the purpose of the information in each source. Be sure to include how data gathered by scientists and officials have changed our understanding of tornadoes. Support your answer with evidence from each source.

Anchor Set
A1 – A10

With Annotations

A couple wakes up, appalled to find their blanket stripped away from them. The world outside is a complete scenery change. Trees are uprooted and debris swirls in the roaring vacuum of air. They have awaken to find their neighborhood devastated by a tornado. There are tornadoes of all levels and sizes, and more research is being conducted on these occasionally deadly forces. Some sources describe the violent storms, explain how they are measured, or even formulate new plans on how to potentially save lives. In many different ways, education on tornadoes is expanding.

One would not believe that a field of chickens stripped of feathers could remain standing, or that a crate of eggs could be gently lifted by a raging storm. However, the article "Tornado!" by Jules Archer confirms that they are all true. The passage was meant to inform the reader, providing facts that helps people have a better understanding on how they form and how the windstorms affect different areas. In paragraph 2, Archer sets a scene by describing real-life happenings that have occurred as byproducts of tornadoes. "In 1974 a tornado in Xenia, Ohio, sucked up hundreds of trees from an orchard. In West Virginia a 1944 tornado passing over the West Fork River sucked the whole river dry" (Archer 2). It can be seen here that the author incorporated such facts in to describe how tornadoes can devastate places. The goal to give detailed descriptions on how tornadoes and what they do is one of the main objectives in Archer's passage is found in the first few paragraphs, where it becomes clear that his goal is to give more insight about tornadoes. Another way that this is shown is when Archer begins to describe how tornadoes are formed, which allows the reader more knowledge of them. "This is caused buy the unique clash of arctic and tropical winds that occurs over the middle states" (Archer 14). By describing how tornadoes are formed, the author provides more knowledge for the reader to take in. Through listing down facts about tornadoes, the author in "Tornado!" is seen to have a goal of informing the reader about cyclones.

While some sources educate about the nature of tornadoes, "Measuring Tornadoes" is meant to show how they are classified and why it is important for people to understand what severity a storm is. "Instead, scientists often use the F-scale, or Fujita scale, to measure how strong tornadoes are" (Kidler 1). The writer of the article included this to emphasize how scientists are able to catergorize and gauge tornadoes. He then provides a chart on the different criteria of the F-scale categories, showing the reader how tornado fits into one of the sections. This helps extend one's knowledge of tornadoes by offering them facts on how tornadoes have different properties and where to put them on the F-scale. Kidler also emphasizes how important the Fujita scale is to show how the scales are used. "That's why it's important to seek shelter in a sturdy

structure when a tornado is approaching" (Kidler 5). This sentence sheds light on one of the main reason the Fujita scale was formed; so that people could understand how important it is to be safe during tornadoes. The cart provided gives information on the different intensities of tornadoes, and thus why shelter is very important in such situations. In the article "Measuring Tornadoes," the author Chris Kidler educates the reader on the Fujitascale and why it is essential.

Another passage, "New Alert System Designed to Warn Residents of Storms and Other Dangers," is written to give the reader more information on ways that people are warned of tornadoes. The passage shows how new technology is used more efficiently to warn people of tornadoes and the benefits of the new advancements in storm alarms. A new system was formed to deliver tornado warnings more effectively to people anywhere who might need it. "the new system, financed by grants totaling nearly $130,000 , allows public-safety officials to send warning and law-enforcement advisories to home phones and to mobile phones registered with the county" (Hudak 3). With the new actio set in place, tornado warnings are now much easier to receive, and the author shows the reader how the system works in correlation to mobile phones. Another way the author infomrs the reader of the new system's multipurpose functions and how they can easily save lives. "The new system can be triggered in response to treatening storms, hazardous spills, wildifres and important law-enforcement advisories. It can help county officials warn residents in low-lying areas of flooding dangers" (Hudak11). This is significant as it informs the reader how the alarm system benefits people in any harmful situation, and wiht how much easier it is to obtain these warnings, the author makes it clear that the new system is beneficial.

With more than 850 tornadoes touching down in the USA per year, it is important to stay educated about them. "Tornado!" "Measuring Tornadoes" and "Nw Alert System Designed to Warn Residents of Storms and Other Dangers" all function as passages to inform readers on multiple aspects of tornadoes. Whether it be the way tornadoes function or how they are measured, all messages further deepen the reader's understanding of tornadoes.

Annotation

Anchor Paper 1

Reading Comprehension and Written Expression

Score Point 4

This response demonstrates full comprehension of ideas. It provides an accurate analysis of the purpose of the information in each article *(Some sources describe the violent storms, explain how they are measured, or even formulate new plans on how to potentially save lives).* These analyses are developed effectively and comprehensively with specifically detailed information from the passages, and each analysis is relevant to the question of how data gathered by scientists and officials have changed our understanding of tornadoes *(By describing how tornadoes are formed, the author provides more knowledge for the reader to take in. Through listing down facts about tornadoes, the author in "Tornado!" is seen to have a goal of informing the reader about cyclones . . . . The writer of the article included this to emphasize how scientists are able to catergorize and gauge tornadoes. He then provides a chart on the different criteria of the F-scale categories, showing the reader how tornado fits into one of the sections. This helps extend one's knowledge of tornadoes by offering them facts on how tornadoes have different properties).* Throughout the response, clear reasoning is supported by relevant textual evidence from all three passages *("That's why it's important to seek shelter in a sturdy structure when a tornado is approaching" (Kidler 5). This sentence sheds light on one of the main reason the Fujita scale was formed; so that people could understand how important it is to be safe during tornadoes).* This evidence is incorporated skillfully into the writing, and transitional phrases *(However, While some sources educate about the nature of tornadoes,)* connect ideas and clarify their relationships. Coherence is also bolstered by the introduction and the conclusion. An effective writing style using a variety of sentence structures and strong word choice is established and maintained *(With the new actio set in place, tornado warnings are now much easier to receive, and the author shows the reader how the system works in correlation to mobile phones).*

The three sorces, *Tornado!* "Measuring Tornadoes", and "New Alert System Designed to Warn Residents of Storms and Other Dangers", all provide helpful information that could be useful for two reasons; to know if you were in a area where tornados were common, or if you were trying to learn more about them. Although these articles have slightly differet purposes, they all could be useful both for helping people and for giving them fastinating information.

The passage from the book *Tornado!* could mainly be useful for informing people about tornados. In the passage, the author talks about what effects tornados can have on areas they hit, how they are formed, what it is like inside them, differnt types of tornados, and much more. Evidence that supports the fact that the purpose of this passage is to inform is in paragraph 6 when the text states, "The name "tornado" originally derived from the Latin word *tonare*, to thunder." This shows that this article's purpose is to inform the reader because this information would not be useful to help someone know what to do during a tornado, but it would be helpful for someone that was studying tornados. This evidence also shows how over time our understanding of tornadoes has changed because when the word "tornado" was first invented, they named it after thunder because one of the only things that they knew about tornadoes was that it began with thunderstorm clouds. However, over time they came up with new names for them from their new discoveries.

The article "Measuring Tornadoes" could be useful both for helping people learn about tornadoes, and keeping people safe from them. The article is used to inform when it talks about how scientists have changed the Fujita scale over time after learning more about tornadoes. In the fourth paragraph, the text states, "Effective Feb. 1, 2007, meteorologists began to use a new, enhanced Fujita scale." This information is helpful to tell people how data gathered overtime has improved our understanding of tornadoes, but it could not be useful for helping people know what to do during tornadoes. However, later in the article, the text states, "But even a weak tornado can turn over your car or damage a mobile home. That's why it's important to seek shelter in a sturdy structure when a tornado is approaching." This quote is telling people what they should do in the event of a tornadoe, proving that this article also could be useful for keeping people safe during
tornadoes.

The last article, "New Alert System Designed to Warn Residents of Storms and Other Dangers", could mainly be used for keeping people safe during tornadoes. Even though the information in it may be interesting to some people, it is minly about how our new understanding of tornadoes can keep people safe. The text in paragraph 12 proves this when it says, "Residents with mobile phones but no land lines must register

their mobile-phone number with the country to receive alerts." This section is telling the reader what they should do to be safe during a tornado, proving that the main purpose of this article is to tell people how to be safe during a tornado. This sorce also shows how our improved understanding of tornadoes is keeping people safe because it shows how the data gathered by scientists led to people designing a new and more efficient way to alert people about tornadoes.

Overall, these three articles all serve a different purpose by either giving people facts about tornadoes, or giving them information on how to stay safe during them. Even with this, all of the articles have at least some information that gives the reader an idea about how new data has changed our understanding of tornadoes. No matter what the main purpose of the article was, all three gave information that would be helpful both for informing people and for telling them what they should do in the unfourtionate event of a tornado.

Annotation

Anchor Paper 2

Reading Comprehension and Written Expression

Score Point 4

This response provides an accurate analysis of the purpose of the information in each article *(Although these articles have slightly differet purposes, they all could be useful both for helping people and for giving them fastinating information)*, and each analysis is tied to the question of how data gathered by scientists and officials have changed our understanding of tornadoes *(This information is helpful to tell people how data gathered overtime has improved our understanding of tornadoes, but it could not be useful for helping people know what to do during tornadoes . . . . Even though the information in it may be interesting to some people, it is minly about how our new understanding of tornadoes can keep people safe).* The analyses are effectively and comprehensively developed using specific and relevant text-based evidence *(The article is used to inform when it talks about how scientists have changed the Fujita scale over time after learning more about tornadoes. In the fourth paragraph, the text states, "Effective Feb. 1, 2007, meteorologists began to use a new, enhanced Fujita scale").* The use of an introduction, conclusion, and effective transitional words and phrases *(In the passage, However, The last article,)* demonstrate effective organization, resulting in clear and coherent writing. Additionally, varied sentence structures *(This sorce also shows how our improved understanding of tornadoes is keeping people safe because it shows how the data gathered by scientists led to people designing a new and more efficient way to alert people about tornadoes)* contribute to maintaining an effective style.

"Tornato", "Measuring Tornadoes," and "New Alert System Designed to Warn Residents of Storms and Other Dangers" all have similer perposes. They are all inform the reader about tornados and how scientists are learning more and more about them. "Tornado", "Measuring Tornadoes", and "New Alert System Designed to Warn Residents of Storms and Other Dangers", all express the idea that tornadoes are very dangerous but scientists are now learning more about them which aids our saftety.

In "Tornado", the narator speaks about how dangerous tornadoes can be. A tornado can "[i]n a matter of seconds, it can kill dozens of people. This shows just hop powerful tornados can be. For them to be able to kill that many people so quickly seems almost impossible. Imagin how many people they could kill in a two hour storm. Tornado also expresses how we still have much to learn about tornados. This is expressed when the narrator says, "Some [tornados] never touch the earth. No one knows why." Considering how long we have been studying tornados, it is amazing that we do not have the answer to a question as simple as why some tornado's never touch the earth.

The article "Measuring Tornadoes" expresses the idea that mesuring tornadoes can be very helpful. This can be seen when it says "Scientists often use the F-scale or Fujita scale to measure how strong tornadoes are." It is very dificlet to know how large and powerful tornados are because it is not possible to simpily measure them. Knowing how large they are can be very helpful when trying to find if you should seek shelter or if you can continue with your dayly life. It is also useful when scientists are learning about tornados. You can find if tornados size has to do with their power and much more when you know how strong tornados are.

The article "New Alert System Designed to Warn Residents of Storms and Other Dangers" expresses the idea of how sending alearts to peoples phones can be helpful when trying to aleart citicens of tornados. This idea can be found when it states "the telecommunications-based system is preferable to sirens, which can be ineffective in heavily wooded areas like Lake [County] and muffled noise-cancelling designes of some homes and new cars." This shows how this new stratagy of alerting peole could be helpful in case of an emergency. It can alert people at almost any time.

These stories all express ideas about tornados and tornado saftey. In "Tornado", "Measuring Tornadoes", and "New Alert System Designed to Warn Residents of Storms and Other Dangers", there is a theme of how dangerous tornadoes can be but learning about tornadoes will be helpul in our future saftey.

Annotation

Anchor Paper 3

Reading Comprehension and Written Expression

Score Point 3

This response demonstrates comprehension of ideas, providing a mostly accurate analysis of the purpose of the information provided in each article *("Tornado", "Measuring Tornadoes", and "New Alert System Designed to Warn Residents of Storms and Other Dangers", all express the idea that tornadoes are very dangerous but scientists are now learning more about them which aids our saftety).*These analyses are relevant to the question of how data gathered by scientists and officials have changed our understanding of tornadoes *(Knowing how large they are can be very helpful when trying to find if you should seek shelter or if you can continue with your dayly life. It is also useful when scientists are learning about tornados).* The development is mostly effective, though at times less appropriate to the task than that of a 4 score point *(This shows just hop powerful tornados can be. For them to be able to kill that many people so quickly seems almost impossible . . . . Considering how long we have been studying tornados, it is amazing that we do not have the answer to a question as simple as why some tornado's never touch the earth).* The response is organized well, with mostly clear and coherent writing, and some varied sentence structures contribute to a mostly effective style.

In all three texts provided the topic was tornadoes. Each text explained the dangers of tornadoes and other information about tornadoes as well. The purpose of all the texts was to help people understand the power of tornadoes. Here are some examples from the texts.

In the text "Tornado" the author talks about how tornadoes can either be weaker or stronger. From examples in the text the author explains the severity of tornadoes. The author also emphases on the fact that the power of the tornado can be extreme or gentle. "...*Some have snatched mattresses off beds, leaving sleepers terrified but unharmed..."* Without being direct the author gives clues that the tornado has the power to terrify people. The author also talks about severe tornadoes. *"...A tornado in Xenia, Ohio, sucked up hundreds of trees from an orchard. In West Virginia a 1944 tornado passing over the West Fork River sucked the whole river dry..."* When the author uses these examples it makes you realize the extreme danger and power tornadoes have not just over you but over many resources as well.

In the second text "Measuring Tornadoes" The author talks about the **Fujita Scale.** The text shows the Fujita scale and the different levels (F1-5) a tornado can be marked as. The author also talks about the power of tornadoes and how they can be weak or strong. "...*The strongest tornadoes, such as the F5 that hit Oklahoma City area on May 3, 1999...."* Using this example the author talks about how the F5 is the most powerful tornado and uses the Fujita Scale to prove his ideas are not thoughts but facts.

In the third text, "New Alert System Designed to Warn Residents of Storms and Other Dangers" The author talks about how we now have a better warning system for dangerous powerful storms. They also give examples of a powerful tornado and talk about the damage and cost of the damage. "....*toppled trees and damaged 30 homes in an area that included Ashley Street, Catherine Lane and Stina Avenue. No injuries were reported, but property damage was estimated between $500,000 and $1 million..."* In just one sentence the author has already described the dangerous power of tornadoes.
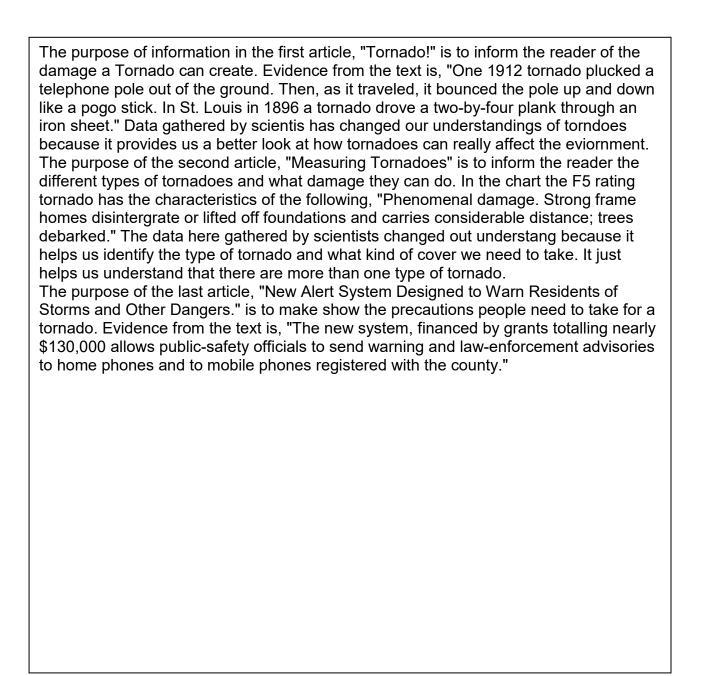
In conclusion, all three articles give evidence and context clues about the overall power of tornadoes. In the texts the authors talk about the power of fear that tornadoes hold over you but also over the resources and objects in the world. Overall, the texts all explained the extreme power of tornadoes.

Annotation
Anchor Paper 4 **Reading Comprehension and Written Expression** **Score Point 3** This response provides a mostly accurate analysis of the purpose of the information in each article, though one that is more general than was seen in the 4 score point anchors *(The purpose of all the texts was to help people understand the power of tornadoes).* The development is mostly effective, but relates to the question of how data gathered by scientists and officials have changed our understanding of tornadoes in a somewhat brief and general way *(The author talks about how we now have a better warning system for dangerous powerful storms. They also give examples of a powerful tornado and talk about the damage and cost of the damage).* The text-based evidence is relevant to the analysis *("...A tornado in Xenia, Ohio, sucked up hundreds of trees from an orchard. In West Virginia a 1944 tornado passing over the West Fork River sucked the whole river dry..." When the author uses these examples it makes you realize the extreme danger and power tornadoes have not just over you but over many resources as well).* Some varied sentence structures contribute to a mostly effective style *(Using this example the author talks about how the F5 is the most powerful tornado and uses the Fujita Scale to prove his ideas are not thoughts but facts).*

The purpose of information in the first article, "Tornado!" is to inform the reader of the damage a Tornado can create. Evidence from the text is, "One 1912 tornado plucked a telephone pole out of the ground. Then, as it traveled, it bounced the pole up and down like a pogo stick. In St. Louis in 1896 a tornado drove a two-by-four plank through an iron sheet." Data gathered by scientis has changed our understandings of torndoes because it provides us a better look at how tornadoes can really affect the eviornment. The purpose of the second article, "Measuring Tornadoes" is to inform the reader the different types of tornadoes and what damage they can do. In the chart the F5 rating tornado has the characteristics of the following, "Phenomenal damage. Strong frame homes disintergrate or lifted off foundations and carries considerable distance; trees debarked." The data here gathered by scientists changed out understang because it helps us identify the type of tornado and what kind of cover we need to take. It just helps us understand that there are more than one type of tornado.

The purpose of the last article, "New Alert System Designed to Warn Residents of Storms and Other Dangers." is to make show the precautions people need to take for a tornado. Evidence from the text is, "The new system, financed by grants totalling nearly $130,000 allows public-safety officials to send warning and law-enforcement advisories to home phones and to mobile phones registered with the county."

Annotation

Anchor Paper 5

Reading Comprehension and Written Expression

Score Point 2

This response demonstrates basic comprehension of ideas stated explicitly in the three passages and some development of the claim *(The purpose of information in the first article, "Tornado!" is to inform the reader of the damage a Tornado can create . . . . The purpose of the second article, "Measuring Tornadoes" is to inform the reader the different types of tornadoes and what damage they can do . . . . The purpose of the last article, "New Alert System Designed to Warn Residents of Storms and Other Dangers." is to make show the precautions people need to take for a tornado).* The student connects the analysis to the question of how data gathered by scientists and officials have changed our understanding of tornadoes, but provides only some development for this connection, especially when compared to upper level responses *(Data gathered by scientis has changed our understandings of torndoes because it provides us a better look at how tornadoes can really affect the eviornment . . . . The data here gathered by scientists changed out understang because it helps us identify the type of tornado and what kind of cover we need to take).* One piece of textual evidence is provided from each article, and a basic organizational structure is followed. The lack of an introduction and conclusion detract from the clarity of the response. Sentence structures show some variety, but tend to be similar in type and length, and word choice and phrasing are not as precise as seen in the score point 3 papers.

From the passage "From Tornado!" the purpose of the information is how objects get lowered through the storm's outer fringes without breaking are getting harmed. "Barnyards have stripped chickens of their feathers; and even snatched balankets and mattresses off beds,leaving sleepers terrified but unharmed". A river in West Virginia was sucked dry from a tornado passing through in 1944. A woman decided to hide from a tornado under her stairway in a closet, and when she came out all that was left of her house was the stairway and the closet! "One tornado transported a crate of eggs 500 yards without cracking a single shells". "Mirrors have been carried for miles and set down unbroken. These objects have been lowered through the storm's outer fringes, a rising air current allowed the objects to descend to earth gentley.

From the passage "Measuring Tornadoes" the purpose of the information provided is how scientist use a scale called F-scale to measure how strong or weak tornadoes could be. The scale is a good way to help us determine tornadoes but isnt very helpful. Tornadoes that do very little damage such as rip through a field would not get a big rating, even if its big. Rating are classified with 28 damage indicators. 'Only about 1 percent of all tornadoes have fallen into the most violent categories-F4 or F5. A weak tornado can even flip over your car or damage a mobile home. "That's why it's important to seek shelter in a sturdy structure when a tornado is approaching.

In the passage "New alert system designed to warn residents of storms and other dangers" the purpose of the information is the launch of an improved weather alert systems and other critical notices. "The new systems, financed by grants totaling nearly $130,00, allows public-safety officials to send warning and law enforcement advisories to home phones and to mobile phones registered with the county. Groveland area didnt recieve a tornado warning because of a technical glitch that has been corrected.Groveland was hit hard in january 25 by a storm that damaged up to 30 homes.

Annotation

Anchor Paper 6

Reading Comprehension and Written Expression

Score Point 2

This response demonstrates a basic comprehension of ideas, providing a generally accurate analysis of the three passages. The analysis of the passage from "Tornado!" is incorrect *(the purpose of the information is how objects get lowered through the storm's outer fringes without breaking are getting harmed)*, but the student provides a correct analysis of the other two passages *(From the passage "Measuring Tornadoes" the purpose of the information provided is how scientist use a scale called F-scale to measure how strong or weak tornadoes could be . . . . In the passage "New alert system designed to warn residents of storms and other dangers" the purpose of the information is the launch of an improved weather alert systems and other critical notices).* The connection of the analyses to the question of how data gathered by scientists and officials have changed our understanding of tornadoes is only implied, though the analyses are developed with mostly clear reasoning and text-based evidence *(The scale is a good way to help us determine tornadoes but isnt very helpful. Tornadoes that do very little damage such as rip through a field would not get a big rating, even if its big).* The response demonstrates some organization, with a section for each passage and use of transitions *(From the passage, In the passage)*, but lacks an introduction and conclusion. Repetitive sentence structure and general word choice contribute to a style that is only somewhat effective.

The purpose of all the passages was to show people, how much we have advanced in the science of tornadoes. Evidence to support my thinking from Tornado! is "A tornado is a powerful column of winds spiraling violently around a center of atmosoheric low pressure.". Evidence to support my thinking from Measuring Tornadoes is "meteorologists began to use a new, enhanced Fujita scale." Evidence to support my thinking from New Alert System Designed to Warn Residents of Storms and Other Dangers is "Lake's previous system could not send alerts to mobile phones." This evidence proves my thinking becuase it shows that people have learned more about tornadoes, and are now able to mesure and understand the severity of them. The technology has become more acurate, and by knowing more and more about tornadoes, not as many people get killed my them.

Annotation

Anchor Paper 7

Reading Comprehension and Written Expression

Score Point 1

This response demonstrates limited comprehension of ideas, providing a minimally accurate analysis of the purpose of the information in the passages *(The purpose of all the passages was to show people, how much we have advanced in the science of tornadoes).* A piece of text-based evidence is provided from each passage, providing minimal development. This evidence is used to connect the analysis to the question of how data gathered by scientists and officials have changed our understanding of tornadoes *(This evidence proves my thinking becuase it shows that people have learned more about tornadoes, and are now able to mesure and understand the severity of them),* demonstrating limited reasoning. Very little organization is present, and word choice is very general, resulting in a minimally effective style.

The purpose of these articles are to show the facts about tornados and tornado saftey. From torndado shows what tornados have done and how they are not as dangerous as people say they are. measuring tornados shows us percent and facts about tornados and what each ratings of tornado can do. new alert stystem shows us how we could be more safe incase of a tornado. it shows us a device that gives warnings before a tornado happens.

Annotation
Anchor Paper 8

Reading Comprehension and Written Expression

Score Point 1

This response provides a minimally accurate analysis of the purpose of the information in the passages *(The purpose of these articles are to show the facts about tornados and tornado safety),* though this analysis is relevant to the question of how data gathered by scientists and officials have changed our understanding of tornadoes only implicitly. The response demonstrates minimal development of its claim, providing one piece of text based evidence from each passage. Coherence is limited, with a very minimal approach to organization. Limited word choice contributes to a style that is minimally effective. |

The purpose of this information is to tell us a little bit more about tornados. And it gives us ideas on what we could do or use to protect us from tornados.

Annotation
Anchor Paper 9

Reading Comprehension and Written Expression

Score Point 0

This response demonstrates no comprehension of ideas. The information provided is too vague to count as analysis or text-based evidence, and the response is completely undeveloped. |

in th first text it is mainly about how and what tornados do.
in the second text it is mainly about what type they are.
in the third text it is mainly about how to protect yourself

Annotation
Anchor Paper 10

Reading Comprehension and Written Expression

Score Point 0

This response demonstrates no comprehension of ideas. The information provided is too vague to count as analysis, and the response is undeveloped. No text based evidence is provided, and the response has an inappropriate style. |

Practice Set
P101 - P105

No Annotations Included

In the passage of of "Tornado!" it explains damages tornadoes can cause like a women hid under her stair way and when she looked up after the tornado the only thing lefted was the stairway, and her closet. Also it carried 500 eggs yards away without cracking a single egg. This shows that in the passage "Tornadoes!" it talks about the damages and odd situations. In the text "Measuring tornadoes" it explains the system metoroligist use to determine what kind of tornado it is. Like in the text it talks about "F1, F2,F3, F4, F5" with is just how they rank them 1 being the harmless to 5 being dangerous that puts people at risk. This says that "Measuring Tornadoes" explains the ranking of tornadoes. In the passage "New alert system designed to warn residents of storms and other dangers" is about how some counties are now puttin alert system to warn residents if a tornado is coming, and how strong/dangerous it could be. This shows that they want us to be safe and get the alerts on our phones/devices to know if a tornado is coming. All the articles explain how tornadoes and warning system have improved over the years. Scienctisy have changed out understanding of tornadoes by giving them rankings. And also by showing the amount of people that died before, til now that are fewer people thathave doed thanks to the alerts and ranking ststems.

Did you know no other country has as many tornadoes as the United States? There are many different purposes in the articles Tornado!, "Measuring Tornadoes", and "New Alert System Designed to Warned Residents of Storms and Other Dangers" such as how unexpected tornadoes are, how to measure the strength, and alert systems for tornado.

To start off, the purpose of the information giving in "Tornado" is about how powerful and gentle tornadoes can be. Tornadoes can be very dangerous and destroy many places, people, animals,or other items. According to Jules Archer "Tornadoes blasting over barnyards have stripped chickens of their feathers. Some have snatched blankets and mattresses off beds, leaving sleepers terrified but unharmed." Tornadoes can rip through houses, cars, buildings, etc. However, tornadoes can also be surprisingly delicate. According to the author, "One tornado transported a crate of eggs 500 yards without cracking a single shell." This shows that even though tornadoes are so powerful, they can be very delicate as well. The purpose of the article "Tornado" was to inform others on how surprising tornadoes can be.

Next, The article "Measuring Tornadoes" informs how to measure the strength of a tornado. Scientists can find out the strength of a tornado by sight. Scientist use whats called a Fujita scale to measure how strong a tornado is. There is a rating such as F0-F5 with a description to show how it is categorized, along with a wind speed. For example, a F1 categorized tornado is "lower limit is beginning of hurricane-force winds. Peels surface off roofs; mobile homes pushed over; moving autos pushed off roads" (Kridler, 1) The original scale has been modified over the years. Yet, it still has helped many scientists over the years.

Lastly, The purpose of "New Alert System Designed to Warn Residents of Storms and Other Dangers" is to inform others about the new alert system. The article compares the new system to the old one, and how improved it is. The new system, along with the old one are to inform the public if there is danger. Such as a tornado. The new system in much faster, and has new improvements. For example, the new system can now send to your mobile device! There is so much to learn about the new danger system!

To sum up, there are many facts about tornadoes. The three articles have many different purposes shown. What do you believe the purpose was? What do you now know about tornadoes?

Tornadoes are one of the most horrifying things. Most people just think of them as big funnels that appear from the sky, but they are more than that. After reading the non-fiction texts, "Tornado!", "Measuring Tornadoes", and "New Alert System Designed to Warn Residents of Storm and Other Dangers", I learned a lot more about tornadoes. I know the cool things they can do and how to measure them. I even now know how some people are keeping people safe from tornadoes! All of the articles were trying to teach something about tornadoes.

In the passage from the book "Tornado!", it talked a lot about the possibilities of what tornadoes can do and what they have done. The text also explained exactly what a tornado is. In my opinion, the passage's main purpose was to make you more knowledgeable on tornadoes. The text didn't mention anything about the Fujita scale or how to protect yourself from a tornado. It just gave good facts about tornadoes, which leaves me to believe that this passage was just trying to give information on the tornado itself. For example, at the beginning of the text, it said stuff like, "One 1912 tornado plucked a telephone pull out of the ground. Then, as it traveled, it bounced the pole up and down like a Pogo stick." This shows that they are giving interesting facts on what a tornado can do. Then, later in the article, it stated, "A tornado is a powerful column of wind spiraling violently around a center of atmospheric low pressure." Now they are telling you what a tornado really is. This all proves that the purpose of this passage was to give you more information on just the tornado itself.

In the article, "Measuring Tornadoes", it's purpose was in a different direction than the passage from "Tornadoes!". This article talked all about the Fujita scale and how scientists measure tornadoes by the damage they cause. The author even included a chart for your better understanding. It described the Fujita scale by stating, "Though we can look at a tornado and see how big it is, we can't measure its strength by sight. Instead, scientists often use the F-scale, or Fujita scale, to measure how strong tornadoes are." In my opinion, this was the most interesting text out of all three of the other texts because it gave be information I never knew and gave me a chart for a visual. This article was clearly all about the Fujita scale and how it has improved and used.

"New Alert System Designed to Warn Residents of Storm and Other Dangers" may be a long title, but it's purpose is simply to tell you about an emergency system in Lake County, Florida and how it is used. The system is best explained in paragraph 3 when it says, "...allows public-safety officials to send warning and law-enforcement advisories to home phones and to mobile devices registered with the county." This text wanted to inform the reader about the system and even talked about how it is better than the old system by saying, "...the telecommunication-based system is preferable to sirens, which can be ineffective in heavily wooded areas like Lake and muffled by noise-canceling designs of some homes and new cars." It is obvious that the purpose of "New

Alert System Designed to Warn Residents of Storm and Other Dangers" is to inform you about Lake County, Florida's way to keep their citizen's safe from a tornado.

After reading the three pieces of text, I became very knowledgeable on tornadoes. I now know what tornadoes really are and what they are capable of thanks to the passage from "Tornado!". I also now know about the Fujita scale because of the article "Measuring Tornadoes" and I know how some places are warning their citizens about tornadoes after reading "New Alert System Designed to Warn Residents of Storm and Other Dangers". Overall, each of these pieces of text are trying to teach the reader about tornadoes.

To warn us how dangers tornados are. In the text of tornado it said "Each year approximatley 850 tornadoes touch down." So dont play with tornadoes. In the text of measuring tornadoes "That is why the scale only goes up to 5" Because there dangers.

The data in all three texts have been very useful in case of a tornado. The passage "New Alert System Designed To Warn Residents Of Storms and Other Dangers" Talks about the government getting new tornado warning systems if one is broken or messed up and doesnt alert the right thing/ to the right place/ or at the right time. In the passage " Measuring tornados" it tells you what damage you should expect for what degree of tornado so you can be prepared for the worst if it does happen. In the passage "Tornado!" it tells you some tornado behaviors like how they are really unpradictable and could be gental like not cracking a single egg out of 500 eggs and transport them around, or they could be dangerous and life someones house of the ground and throwit far away anf have it crumble into peices. All of this data from these three articals can save someone in a tornado.

Practice Set

(Order of Scores: Reading Comprehension and Written Expression, Conventions)

Paper	Score
P101	2,2
P102	3,3
P103	4,3
P104	0,0
P105	1,1